

Kallisti MUD
Builder's Handbook, Version 4.2
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www.kallistimud.com

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I OVERVIEW

This document is a tutorial for new builders as well as a reference guide to those who are more experienced. Although there are numerous editors for DikuMUDs, it is important to learn how to build an area and connect it into the MUD. In the case that a problem should arise with your area, it is important for you to know why the problem occurs and for you to know how to fix it (each section provides some details of the online creator that Kallisti uses). With a working knowledge of how to build an area, along with how some of the mechanics work, a better and more suitable area can be produced – and it will have a much better chance of acceptance for Kallisti MUD.

Contact the Head Builder on legendsofkallisti.com 4000 to get started. Please read this handbook first and follow the guidelines about submitting area proposals.

To receive a zone assignment, you must submit a proposal ahead of time, which describes the area in detail. Ensure that your proposal has enough detail to clearly show what you have in mind and how your new area fits into the theme and structure of the MUD.

Below is a list of what a basic proposal should include:

- zone name
- suggest levels
- overview/storyline (how it ties to the current mythos of LoK)
- notable mobiles
- notable objects and equipment
- notes – any special procedures (progs) if you wish to add them, puzzles, etc.

Please type `help building` in the MUD to check for any updated proposal requirements.

A note on fonts and stylization used in this document:

- the *Courier New* font denotes code and commands to be typed in the MUD or displays from it.
- *italics* denotes something that is either not yet implemented or is unavailable for your use

II TERMINOLOGY

Here are some common terms used in building and in this handbook:

Bitvector	This is a number assigned to a flag in such a manner that more than one may be used by simply adding the numbers together. Bit vector numbers are in the form x^2 .
Desc	Short for 'description.'
DB	Database. The files that make up the 'world' of a MUD.
Flag	A bitvector that tells the MUD that a particular monster, objects, or room has a certain quality. (i.e. 'Dark,' 'Magic,' 'Aggressive') See FLAGS in section III.
Field	A flag location. i.e. 'Dark' and 'Indoors' are two separate flags in the same field.
Mob	Mobile. A monster. Can also refer to the mob file.
MobProgs	Mobile programs. Similar to Spec Procs but can be edited directly on the mob rather than compiled in the in mud's code itself. Also called MProgs.
Nobits	This shows up if <code>stat</code> is used on something with no affects.
NPC	Short for 'non-player character.' Used synonymously with 'mob.'
Obj	This refers to the object file.
ObjProg	Object programs. Similar to Spec Procs but can be edited directly on the object rather than in the mud's code itself. Also called OProg.
PC	Short for 'player character.'
Tilde	This is a tilde: <code>~</code> . It signifies the end of a line or a field in some of the database files.
Trn	This is an optional portion of the zone. It's where characters can learn or train new skills.
Shp	This is an optional portion of the zone. It's where characters can buy or sell items.

Spec Proc	Short for 'special procedure' the special routines that the MUD should use with a mob, obj or room. This will be explained fully in section XII.
Vnum	An object, monster, or unique identification of room number. Stands for 'Virtual Number.'
Wld	These are the rooms of the zone.
Zon	Used synonymously with 'area.'

III THE BASICS

There are two ways to build:

- Create the files yourself
- OLC (OnLine Creation)

The easiest way to get started and see what is needed is to submit your zone idea and receive a zone number on the builder's port. You can then start to use the OLC to create your area.

The other way is to manually create the files needed in a text editor. When you build this way, a common question is "What is my zone assignment?" We suggest that if you do not have a zone number assigned to you, that you use easily substituted letters in place of the zone number. (Example: QQA, QQB... QQZ – each standing for a separate zone number.)

For all examples, the area under creation is referred to as 'Handbook' or 'example area.' We recommend nano, emacs or vi for Unix platforms, and something simple like Notepad for Windows platforms. Note that all files created in MS Word, Word Pad, etc. must be exported into or saved in ASCII format before they can be used.

FILES

For each area, there are six files that can be created for inclusion into the Kallisti MUD's database. All except the shop file and the trainer file are mandatory.

Area.wld	The file that contains all the information on the rooms of an area.
Area.mob	This file contains all mobile information.
Area.obj	This file contains all object information.
Area.zon	A ' meta-file ' that lists which mob/obj goes where, who gets what, how often the area resets, etc.
Area.shp	Information on shops . (This file does not have to be included if there are no shops.)
Area.trn	Information on skill/spell trainers in your area, if any. (Not covered in this manual.)

[Quest](#) files are handled separately and are not mandatory.

This manual will cover the format for an entry into each file, show you that room as it will display in the mud, and then review the OLC process.

FLAGS

A flag tells the MUD that there is something special about a mob, room, or object. In the sections below, lists of flags will be given with a number and a bitvector, next to it. Here is the list of some of the room flags that will appear below in the area.wld section:

1	A	DARK	16	E	LAWFUL	256	i	NO SUMMON
2	B	DEATH	32	F	NEUTRAL	512	J	PRIVATE
4	C	NO MOB	64	G	CHAOTIC	1024	K	GODROOM
8	D	INDOORS	128	H	NO MAGIC	2048	L	PEACEFUL

Some fields can have more than one flag and others only one. If a field can have multiple flags you include the list of alpha characters for that field.

For example, when building a small cellar, you would choose the flags 'Dark' (a) and 'Indoors' (d). To give one room two flags you put the alpha characters together and place that in the flags spot of the data of that room. Thus, for this example, 'Indoors' + 'Dark' = ad.

VIRTUAL NUMBERS

Every mob, object, and room must have its own virtual number for the MUD to identify it. Each number must be unique among its own type. You can have mob 2200, obj 2200 and room 2200, and they will all be different.

THE END OF THE FILE

When you arrive at the end of your .obj, .mob, .zon, .wld, .trn, or .shp file, you must put the following at the end:

```
#99999  
$~
```

This allows the MUD to read past through and past the files. Failure to do so will cause the MUD to crash upon reboot.

IV ONLINE CREATOR

As mentioned in the previous section, Kallisti uses the Online Creator (OLC) for almost all building work. This is because OLC is "more visual" to some people; but more importantly, it offers immediate feedback. You can build your mob or object and immediately load it for testing (and tweak if necessary!). It also eliminates the need to remember where the tildes are supposed to be, and therefore prevents any unnecessary crashes upon boot.

The setup and navigation of OLC is like that of the main login menu for your character; you input numbers to move through the different levels of OLC and input text to write descriptions and add flags to the mobs/objects. Currently, OLC supports editing for the [world](#), [mobile](#), [object](#), and [zone](#) files as these are the four main files required for a zone. Trainer, [quest](#) and [shop](#) files are still done the "old way" and will unlikely be supported by OLC as they are edited by a very experienced builder, usually the Head Builder. (Trainer file formats will not be discussed in this manual.)

Almost all the options for the world, mobile, object, and zone files described in the Handbook can be accessed via OLC. Some options are considered "advanced" and can only be accessed when editing the file itself. If you need access to these options, contact the Head Builder with your request.

V SIMPLE TRICKS AND ADVICE

This section is simply composed of building tips for novice builders. This is very subjective and based on the experiences of builders. Not all these techniques may be of use to your average builder.

- Review building without the DIKU Editor (OLC) first. It is a lot easier to troubleshoot when you understand what exactly goes on with all those numbers in those files.
- Do it on paper first. Do it big.
- Areas always seem to shrink while you're building it, from a cross of aggravation and editing. Having a map to work from helps a LOT when doing exits and provides a visual impetus to getting all those tedious bits done.
- Do the .wld file first. The .wld file usually takes the longest. Once past that long fight, the .mob and the rest will come easier.
- The .zon file contains 100 rooms. Use the space efficiently. This is because there are 100 rooms per .wld file. If you have 101 rooms, figure out a way to cut out that extra room and still tell your zone's story.
- Your .zon file will always be wrong on the first try. Get used to it.
- An area will take twice as long as you think it will to build.
- A certain boredom sets in sometimes, just set it aside for a while if this happens; it's better to build when you want to then turn out something uninspired.

- Be fair with the items: Good items should be hard to get while lousy items should require much less effort. Equip the most powerful items to a mob; thieves can often steal stuff from mobile inventories without even bothering to combat the mob.
- Look at it from a player's point of view. Always keep in mind the tricks that you pulled while playing and try to prevent them from happening in your area.
- Avoid escalation! Your zone can still be great WITHOUT having the most powerful weapons, most protective armor, and most difficult mobs in the entire MUD.
- Try to tell the story of your zone so that it relates to the other stories of the MUD. This creates for a more cohesive and well-constructed realm.
- Talk to players to get a feel of what they want from a zone so you can cater to (some) of their needs.
- Talk to experienced builders to learn some building tricks. You can use them in your area or build upon those tricks.

Ok. On to the building!

VI WORLD FILE

So, you have been assigned a zone number and are now ready to create your area. The first thing that you are going to work on is the world file. We will look at the file format, explain a bit about it, and then go through how to edit it manually and with OLC.

The following is an example of a world file format.

```
#2200
The First Room~
  You are standing in the first room of this area. There are sure to be a few
  more rooms to follow, soon to be chock-full of adventure, danger, romance, and
  strange gerbils from Morovia. There is a sign hanging from the east wall here,
  and a large steel grate bars the way to the north.
~
22 d 0 asf
D0
You spot the Second Room to the north, behind a large steel grate.
~
steel_grate~
1 2200 2201
D1
You spot a third room to the east.
~
~
0 -1 2202
E
sign~
The sign says:

WELCOME TO THE FIRST ROOM!
~
E
second description~
This is merely to show you that you need to have a second E after or when you
use an extra description.
~
S
#2299
The Last Room~
This is the last room of the area. There were many rooms between this and the
```

```

last.
~
22 adij 0 asf
D3
A solid brown door bars your path.
~
solid_door~
3 -1 2298
S
#999999
$~

```

EXPLANATIONS

#2200

This is the virtual number of this room. Totally unique; no other room in the DB will have this number.

The First Room~

[Short description](#): the 'title' of the room, typically not more than 5-6 words long. Note the tilde marking the end of this field.

You are standing in the first room of...

~

The [long description](#) of the room. This is what a player sees if s/he types look in that room. What is in this section is up to you. More about the formats and various types of descriptions can be found below. Note that a tilde follows on a line by itself. This is important, so that the mobs and objs in the room won't be jumbled onto one line.

22 d 0 asf

The first number is the **zone number** of this room; what zone should the MUD consider this room to be in for game purposes. Please see 'zone numbers' in section III of this handbook. The second character is the [room flag](#) value. Please see 'flags' in section III of this handbook, and 'room flags' below. The third number is [sector type](#). Please see 'sector types' below. The fourth is [house flags](#).

D0

An [exit to direction](#) 0. The section on 'exits' below will shed more light on this subject.

You spot the Second Room, behind a large steel grate.

~

[Direction description](#); what a player would see if he/she typed look north. Note the tilde on its own line afterwards. This is so that a carriage return will be sent after the direction description. In the case of the next line, no <CR> is sent.

steel_grate~

What words can be used to manipulate the door. These two words can be used in conjunction with open, close, pick, and look commands, etc. If the room were to have normal [exits](#), a tilde would be left on this line alone. Note a new feature in the world file; the underscore character. In the old days, this could not be done. See the world file section for details on how this differs from using grate steel.

1 2200 2201

The first number is the **door value**, 1 being open/close/pick/lock and unlockable. This and the other numbers will be explained more fully under 'exits' below. The second number is the **key's number**, the virtual number of the object that can be used to lock or unlock this door. The third number is the **vnum of what room this exit leads to**.

F

<direction> <speed> <type>

[Flows](#) use the letter F to denote a flow type in the room. Direction is the direction of the flow. Speed is the number of

room pulses, about 20 seconds real time that will pass by before the player is moved to the next room. Type is flow type.

T
<time> <destination room> <make> <counter>

[Teleporters](#) use the letter T to denote a teleporter in the room. Time is the number of room pulses, about 20 seconds, the character will be in the room before teleporting. Destination room is the vnum of the room the character will be teleported to. Make is a bitvector for special qualities about the teleporter. Counter should be zero.

E
Tells the MUD there is an [extra description](#) coming.

sign~
The keywords used to look at the [extra description](#) (i.e. look sign.) Note the tilde ending the field.

The sign says:
~
The text of the [extra description](#). Again, note the placement of the tilde on its own line.

S
End-of-room character.

#999999
\$~
End of the file characters.

OLC

You have been assigned a zone. If you aren't there you should goto <zone number>00 for our example you would goto room 100. Remember to turn on showroom. It will show you certain characteristics of the room. For our beginning zone it looks like this:

```
Sector: Inside |
the start of zone 1 | +-+
(#100) [ None ] |
You are in a room.
```

The basic room commands are:

RSTAT	This command shows the stats of the room you are in.
REDIT	This command will begin editing the room you are in and bring up the room edit menu.
RSET	The command is used to change the stats of the room you are editing.
RSAVE	This command saves all the rooms in the current zone.

RSTAT

This command can give you information about an existing room using rstat <room number>. An RSTAT of the Temple in Midgaard at 3001 will look like this:

```
Room name: The Temple Of Midgaard
VNum: [3001], RNum: [1537], vZone: [30], rZone:[25], Type: Inside
SpecProc: None, Flags: NoMob Indoors NoMagic Peaceful Camp SetRecall RegenSP
RegenHP (14944396), House: None (0)
Description:
You are in the southern end of the hall in the Temple of Midgaard. The
Temple has been constructed from giant marble blocks, eternal in appearance,
```

and most of the walls are covered by ancient wall paintings picturing Gods, giants, and peasants.

Large steps lead down through the grand Temple gate, descending the huge mound upon which the Temple is built and ends on the Temple Plaza below. A few notes have been nailed to the Temple walls. Type: LOOK NOTES to see what they say.

Extra desc: notes sign

Chars present:

Contents (1): the steps of Midgaard Temple(3079), the bulletin board(3099)

Exit north: To: [3054], Key: [-1], Keywrd: None, Type: None

At the northern end of the Temple Hall is a statue and a huge altar.

Exit east : To: [3566], Key: [-1], Keywrd: None, Type: None

No exit description.

Exit south: To: [3005], Key: [-1], Keywrd: None, Type: None

You look down the huge stone steps to the Temple Plaza below.

Exit west : To: [3056], Key: [-1], Keywrd: None, Type: None

You see a walkway leading into a small chamber.

The same room looks like this in the file:

#3001

The Temple Of Midgaard~

You are in the southern end of the hall in the Temple of Midgaard. The Temple has been constructed from giant marble blocks, eternal in appearance, and most of the walls are covered by ancient wall paintings picturing Gods, giants, and peasants.

Large steps lead down through the grand Temple gate, descending the huge mound upon which the Temple is built and ends on the Temple Plaza below. A few notes have been nailed to the Temple walls. Type: LOOK NOTES to see what they say.

~

30 cdhlsvwx 0 0

D0

At the northern end of the Temple Hall is a statue and a huge altar.

~

~

0 -1 3054

D1

~

~

0 -1 3566

D2

You look down the huge stone steps to the Temple Plaza below.

~

~

0 -1 3005

D3

You see a walkway leading into a small chamber.

~

~

0 -1 3056

E

notes sign~

&0B*****

&07

Here are some directions to commonly requested locations - type

HELP MIDGAARD for a complete map of town.

```

TRAINING ZONE   - 8 South
GUILD           - Type GUILD
BANK            - 2 North, 1 East
DONATION ROOM  - 1 North, 1 East
BAKERY         - 2 South, 1 West, 1 North
PRAYER ROOM    - 1 West
WEAPON SHOP    - 2 South, 3 East, 1 North
ARMOURY        - 2 South, 1 East, 1 North
POST OFFICE    - 1 South, 1 East, 1 North from here
RECEPTION/RENTAL - 1 South, 1 East, 1 Up
MAPS & KEYS     - 2 South, 1 East, 1 South

```

If you are new here type NEW for some general info. You can use the ADVICE channel if you have questions. To go to the starter area type MUDSCHOOL.

Regeneration is higher in the Temple, plus you do not require food.
&0B*****&--
~
S

REDIT

To start to edit your area you enter `redit` which will begin editing the room you are in and brings up the following:
You begin editing zone #1 rooms.

Options:

```

redit done      - stop editing your zone
redit create    - create a new room
redit delete    - flag a room to be deleted (after save & reboot)
redit undelete  - Cancel room deletion (if you haven't rebooted yet)
redit default   - change your default room template
redit save      - save all rooms to wld file
redit allow     - turn on global room editing (admin)
redit deny      - turn off global room editing (admin)

```

Room Vnum: 100

```

1) Room Name      : the start of zone 1
2) Description    : (Not Shown)
3) Sector Type    : Inside
4) Flags          : None
5) Extra Descriptions : (None)
6) Exit north     : No Exit
7) Exit east      : No Exit
8) Exit south     : No Exit
9) Exit west      : No Exit
10) Exit up       : No Exit
11) Exit down     : No Exit

```

To create another room you need to be in `redit` in your zone.

- Use `redit default <room number>` to set your default room settings for when you create the new room.
- Use `redit create <room number>` to create another room like your default.
- Use `redit delete <room number>` to delete a room after reboot.
- Use `redit undelete <room number>` to unmark it for deletion before reboot.

When you are done creating and editing your rooms:

- Use `redit save` or `rsave` to save your work.
- Use `redit done` to exit from the room editor.

RSET

To edit the room, you need to be in `redit` and use any of the `rset` commands. Plain `rset` brings up the following:

Usage : `rset <field|flag> [value]`

Valid fields/flags are:

name	room name
description	room description
exit	add/change room exits
edesc	extra descriptions
flags	room flags
type	room type
flowroom	target room when flow occurs
flowspeed	rate of flow
flowtype	type of flow

teleroom	target room for teleporting
teletype	teleporter t
teletime	how often teleporter triggers

`rset` will accept multiple flags/types on a single line. Specifying a flag toggles that flag. Setting a type overrides any previous type.

For detailed field help, type `rset <field>`

Example : `rset name The Temple Of Midgaard`
`rset flags dark notrack inside`

Room name: the start of zone 1

VNum: [100], RNum: [1], vZone: [1], rZone:[1], Type: Inside

SpecProc: None, Flags: None

Description:

You are in a room.

Chars present: Ivy(PC)

Every field has more information about its formats and flags if you do `rset <command>`.

RSAVE

Used when you are done editing your zone and want to save it.

OLC COMMANDS FOR EACH FIELD

Name/Short Description	<code>rset name <room name></code>
Long Description	<code>rset description</code>
Extra Description	<code>rset edesc <command> <keyword list></code>
Room Flag	<code>rset <flag></code>
Sector Type	<code>rset <room type></code>
Exits	<code>rset exit <direction> <command> [arguments]</code>
Flows	<code>rset flowroom <exit direction></code> <code>rset flowspeed <number></code> <code>rset flowtype <number></code>
Teleporters	<code>rset teleroom <room #></code> <code>rset teletype <number></code>

DESCRIPTIONS

Descriptions are self-explanatory. However, the placement of tildes is very important when manually creating a file.

SHORT DESCRIPTION OR NAME

The short desc is placed at the top of the room description and can be seen even if the player is in 'brief' mode. Simply put, this is the title of the room, so it is sometimes referred to as the 'title desc'. Short descs should be kept to one line minimum... the shorter the better. In fact, it should just be the shortest possible description of this room: 'A Dark Tunnel,' 'The Bakery,' or 'Ms. Celande's Office.' A short desc follows this format:

Manual

Title of Room~

OLC

```
< > rset name
Usage   : rset name <room name>

Example : rset name The Bakery
```

LONG DESC OR DESCRIPTION

The long desc is the full description of the room, which a player will typically see when entering or by typing look. When creating a long desc, please keep in mind to start the first line with two spaces, word wrap each line to 79 or less characters, use two spaces between the end of a sentence and the start of a new one, and put the ending tilde on a line by itself. Also, put an extra blank line between each paragraph.

Manual

Long Desc
~

OLC

```
< > rset description
Existing data found, displaying...
-----
  1] You are in a room.
-----
Begin entering your text now (/? = help /s = save /c = clear /l = list)
(The line below is 78 characters - press ENTER before exceeding that length)
-----+
Room name: the start of zone 371
VNum: [100], RNum: [100], vZone: [1], rZone:[1], Type: Inside
SpecProc: None, Flags: None
Description:
You are in a room.
Chars present: Ivy(PC)

1]
```

If you type `/?` You can get the following list of commands.

Special editing commands:

```
-----
/?          display this help list
/l [from] [to] list buffer (or part of it), with line numbers
/ [from] [to] list buffer (or part of it), with line numbers
/n [from] [to] list buffer (or part of it), without line numbers
/c          clear entire edit buffer
/d <line #> delete specified line or current line if none specified
/g <line #> goto line specified
/<line #>   goto line specified
/i <line #> insert line before line specified or before current line if none
specified
/r <old> <new> global search and replace
/a          abort editing without saving
/! <command> execute external command outside of editor
/s          save buffer and exit editor
```

These commands are used to work with editing the room description. Remember to save your description with `/s` on a line by itself. Once you have the room the way you like it, remember to use `redit save` to save your work.

EXTRA DESC

An extra desc (of which there can be many, one, or none for each room), is something else specific to look at, not normally seen just by typing `look`, or entering the room. An extra desc is started by an `E` (a separate `E` for each extra desc in the room), followed by the keywords that can be used to look at this description on the next line. Each keyword is separated by a space, followed by a tilde at the end of the line. Then, the description itself, followed by a tilde on its own line.

Manual

```
E
keyword1 keyword2~
You spot the keywords. They look important!
~
```

OLC

```
< > rset edesc
Usage   : rset edesc <command> <keyword list>
```

To add an extra description, use `rset edesc add <keyword list>`, as in:
`rset edesc add sign`

To set the description text, use `rset edesc set <keyword>`, as in:
`rset edesc set sign`

Use no doublequotes and use only one keyword.

To delete an extra description, use `rset edesc del <keyword>`, as in:
`rset del sign`

To show the description text, use `rset edesc show <keyword>`, as in:
`rset edesc show sign`

ROOM FLAGS

Manual

Please consult the section on flags in section III for how bitvectors are added and used. Briefly, add each flag's corresponding values that you want for a particular room to find your room flag number. A zero signifies no flags. A room can have multiple flags.

0	-	NONE	No flags.
1	a	DARK	Character cannot see without a light source.
2	b	DEATH	Death trap.
4	c	NO_MOB	Monsters cannot enter this room, though you can LOAD a mob here.
8	d	INDOORS	Players in this room will not get weather messages.
16	e	LAWFUL	Players with an evil alignment cannot be summoned here.
32	f	NEUTRAL	Players with an neutral alignment cannot be summoned here.
64	g	CHAOTIC	Players with a good alignment cannot be summoned here.
128	h	NO_MAGIC	No magic may be used in this room.
256	i	NO_SUMMON	Player may not be summoned from this room.
512	j	PRIVATE	Portals will not go here; Immortals cannot use goto if two or more players are here. Can't astral walk from here and MSDP doesn't display the room number.
1024	k	GODROOM	Lower level (< 212) Immortals may not enter these rooms. PCs won't show up on where unless an Immortal is using this command. Mobs can walk in and use goto to enter this room; PCs can walk in if possible.
2048	l	PEACEFUL	Mobs and players cannot instigate an attack, unless outlaw.
4096	m	TUNNEL	Limited size can enter these rooms. Area spells can harm all in the room.
8192	n	GATEWAY	<i>Allows travel. Do not use; used internally</i>
16384	o	SILENT	No spoken communication allowed.
32768	p	DEAF	No form of communication will be heard in this room.
65536	q	VAULT	<i>This room is a access restricted player house vault and should only be used when creating player houses.</i>
131072	r	HCSAVE	<i>Do not use; used internally to save the rooms contents.</i>
262144	s	CAMP	Room where players can camp.
524288	t	REGIN SP	Increased stamina point regeneration. (Do not use without approval.)
1048576	u	PKILL	Open player killing allowed.
2097152	v	RECALL	Room that a player can set to recall to.
4194304	w	CRAWLWAY	Have you crawl to move into it.
8388608	x	REGEN HP	Increased hit point regeneration. (Do not use without approval.)
16777216	y	REGEN MP	Increased mana regeneration. (Do not use without approval.)
33554432	z	TRAP	<i>Do not use; used internally.</i>
67108864	A	BLOODTRAIL	<i>Do not use; used internally.</i>
134217728	B	OVERWORLD	<i>ASCII-mapped area. Check with admin before using.</i>
268435456	C	BANK	Room contains a bank.
536870912	D	WILD MAGIC	Spells have various affects.
1073741824	E	NO RECALL	Not available in OLC.
2147483648	F	NO ENTRY	Not designed to be entered by players. Removes this room from the rooms to explore count.

OLC

```
< > rset flags
Usage   : rset <flag>
```

Valid flags are:

```

dark          death
nomob        indoors
lawful       neutral
chaotic      nomagic
nosummon     private
godroom      peaceful
tunnel
silent       deaf
vault        hcsave
camp
pkill        recall
regensp      regenhp
regenmp      trap
bloodtrail   overworld
bank         wildmagic

```

You may specify more than one flag on the command line.

SECTOR TYPES

The 'sector type' of a room determines how many stamina points it costs to enter that room. Prior to K5, you could choose only one of these types. In K5, you can choose up to 3 of these types.

Manual

1	a	INSIDE	No weather messages.
2	b	CITY	Roads and streets.
4	c	FIELD	Grass, plains.
8	d	FOREST	Trees.
16	e	HILLS	Mini-mountains.
32	f	MOUNTAIN	Need climbing gear or fly.
64	g	WATER, SWIM	Can't sleep here!
128	h	WATER, NOSWIM	Need boat or fly.
256	i	AIR	Must be flying.
512	j	UNDER WATER	Need water-breathe abil.
1024	k	JUNGLE	Need hacking weapon.
2048	l	DESERT	Major water consumption.
4096	m	ARCTIC	Must have snowshoes.
8192	n	UNDERGROUND	Area spells can harm all.
16384	o	SWAMP	Trolls will sneak.
32768	p	OCEAN	<i>For the Overworld (flag B)</i>
65536	q	BRIDGE	<i>For the Overworld (flag B)</i>
131072	r	TRAIL	<i>For the Overworld (flag B)</i>
262144	s	MTN. PEAK	<i>For the Overworld (flag B)</i>
524288	t	PASTURE	<i>For the Overworld (flag B)</i>
1048576	u	FENCE	<i>For the Overworld (flag B)</i>
2097152	v	PORTAL	<i>For the Overworld (flag B)</i>
4194304	w	FORESTJUNGLE	<i>Temp forest back to jungle</i>
8388608	x	BEACH	Sandy beaches.

OLC

```

< > rset type
Usage   : rset <room type>

```

Valid room types are:

```
inside      city
field       forest
hills       mountain
swim        noswim
flying      underwater
jungle      desert
snow        underground
swamp       ocean
bridge      trail
peak        pasture
fence       portal
forestjungle
```

Example : rset mountain

HOUSE FLAGS

The 'house flags' of a room determine what type of house room that the room is.

Manual

1	a	ENTRY	
2	b	POSTERN	
4	c	VAULT	
8	d	DONATION	
16	e	HOUSE CRASH	DO NOT USE.
32	f	ROOM	
64	g	STABLES	
128	h	ALTAR	
256	i	SHOP	
512	j	CLAN ROOM	
1024	k	THRONE	
2048	l	FORGE	

OLC

```
< > rset house
Usage  : rset <house_type>
```

EXITS

Some notes:

- The key number is simply the vnum of the key that can open the door. A door without a keyhole is represented by a -1 in this spot.
- A door that needs to be picked or knocked must have a 0 in this spot.
- Wizlocked doors without keyholes may still be opened by an Immortal and might prove useful in the case of a spec proc. (i.e. The door opens when a character tries the command `_prog knock door.`)
- The exit-to-room number is the vnum of the room where the exit leads. If -1 is used as the exit-to-room number, the exit will not really exist. This is useful if you want a directional description, but no exit.

- Please note that adding a description for the door itself is usually done immediately after the exit direction. Details to the door should be nested under the 'extra descriptions' part of the room database.

Manual

Exits use the letter D and a number:

0	NORTH	1	EAST	2	SOUTH	3	WEST	4	UP	5	DOWN
---	-------	---	------	---	-------	---	------	---	----	---	------

The exit description is used for when a player types `look <direction>`. In most cases, this should be a vague description of what the next room might be and is followed by a tilde on a line by itself. Thus, an exit D4 is an upward direction, while D2 would be to the south. Each exit starts with its own direction field and contains an exit description and door keyword list (both of which can be left blank with a tilde), and a fourth line containing a door type, key number, and exit-to-room number. Rooms without exits need no direction fields, and this section may be safely ignored.

The next field is the door keyword list, used for manipulative door actions, such as open, close, pick, etc. These words are separated by a space and are followed by a tilde on the same line. Use an underscore character “_” in the door name, to give it a better look within the game. Using `heavy_door`, for example, will result in messages like “You open the heavy door” in the game, which looks much better and less awkward than “You open the heavy.”

Exits may have any of the following flags for the type of door totaling the bitvestors.

0	NORMAL EXIT	No door.
1	NORMAL DOOR	IMPORTANT: Should always be set if a door exists.
2	CLOSED	Door is closed.
4	LOCKED	Door is locked.
8	WIZLOCK	Door only unlocked by a key or Immortal.
16	BARGEPROOF	Door may not be barged open.
32	KNOCKPROOF	Door may not be knocked open.
64	PICKPROOF	Door may not be picked open.
128	SECRET	Door will not show up under <code>look <direction></code> .
256	FALSE	The door does not go anywhere.
512	CLIMB	Must have climbing gear or fly to use exit.
1024	NO MOB	Mobs may not pass through this door.
2048	FLY	Characters must be affected by fly to use exit.
4096	NO RANDOM	<i>Unimplemented.</i>
8192	GOD ONLY	Only gods can walk this direction.

OLC

`< > rset exit`

Usage : `rset exit <direction> <command> [arguments]`

Direction must be `n`, `s`, `e`, `w`, `u`, or `d`. Valid commands are:

```
keyword          valid names to use when opening/closing the door,
                  if there is a door.
description      the description seen when you look in that direction
key              sets the vnum of the key for this door
delete           remove this exit
connect          connect this exit to a room
disconnect       disconnect this exit from a room
Flags: isdoor, pickproof, bargeproof, knockproof, locked,
       wizlocked (key only), secret, false, climb, fly, nomob, godonly
```

For detailed help with connect/disconnect, type
rset exit <dir> (dis)connect.

Example : rset exit n keyword door
 rset exit n isdoor
 rset exit n connect 2 3001

FLWS

Manual

Flows use the letter F to denote a flow type in the room. The format should be:

F
<direction> <speed> <type>

Directions have the same numerical values as under 'exits,' above.

Speed is the number of room pulses, about 20 seconds real time that will pass by before the player is moved to the next room. This is a value of 1 to 5 with 1 being the fastest.

Flow type one of the below, as follows:

0	NO FLOW	No need for this.	4	<i>HURRICANE</i>	<i>Not yet implemented.</i>
1	RIVER	Plain old flowing water.	5	<i>DUMP</i>	<i>Not yet implemented.</i>
2	<i>AVALANCHE</i>	<i>Not yet implemented.</i>	6	<i>SHOOT</i>	<i>Not yet implemented.</i>
3	<i>WIND</i>	<i>Not yet implemented.</i>			

OLC

< > rset flowroom
Usage : rset flowroom <exit dir>

Must be a valid exit direction (0-5):

< > rset flowspeed
Usage : rset flowspeed <number>

Valid room speeds are:

1 - 10 with 1 being the slowest and 10 fastest.
:

< > rset flowtype
Usage : rset flowtype <number>

Valid room speeds are:

0 None
1 River
2 Avalanche
3 Wind
4 Hurricane
5 Dump
6 Shoot

: Not implemented yet!

TELEPORTERS

Manual

Teleporters use the letter T to denote a teleporter in the room. The format should be:

```
T  
<time> <dest room> <make> <counter>
```

Time is the number of room pulses, about 20 seconds, the character will be in the room before teleporting. This should be a number between 1 and 5, with 1 being the fastest.

Dest room is the vnum of the room the character will be teleported to.

Make is a bitvector for special qualities about the teleporter.

1	LOOK	Player will be teleported if look command is used.
2	COUNT	Regular counter is used.
4	RANDOM	A random counter is used instead of the set one.
8	SPIN	<i>Not yet implemented.</i>

The "counter" field is used internally and should be set to 0.

OLC

```
< > rset teleroom  
Usage : rset teleroom <room>
```

Must be a valid room number:

```
< > rset teletype  
Usage : rset teletype <number>
```

Valid teleport types are:

```
0      None  
1      Look (forces a 'look' after teleporting)  
2      Count (timer isn't reset after teleport)  
4      Random (timer is reset to random number after teleport)  
8      Spin (not implemented)
```

Note this is a bitvector so you can combine multiple flags by adding values.

MATERIALS

Manual

Materials use the letter M to denote a material load type in the room. The format should be:

```
M  
<material type> <material frequency> <material quality>
```

Material frequency: a number from 1 to 10 with 10 being the most frequent.

Materials type is one of the below:

0	Poison	11	Paper
1	Wild Herbs	12	<i>Raw Herbs NIU</i>
2	Food	13	Raw Food
3	Metal	14	Metal Ore
4	Gemstone	15	Gem Ore
5	Milled Wood	16	Timber
6	Magic Energy	17	Unstable Magic
7	Leather	18	Hides
8	Fabric	19	Yarn
9	Stone	20	Boulders
10	Refined Bone	21	Bones

Material quality is one of the below. Please keep it between 1 and 10.

1	Junk	8	Superior
2	Rough	9	Pristine
4	Average	10	Exquisite
6	Good	11	Flawless
7	Excellent	12	Divine

OLC

< > rset materialtype

Usage : rset materialtype <material #>

< > rset materialfreq

Usage : rset materialfreq < 1 - 10 >

< > rset materialqual

Usage : rset materialqual < 1 - 10 >

ROOM DAMAGE

Under Construction – DO NOT USE

Manual

Room Damage uses the letter X. The format should be:

X

<type> <number of dice> <size of dice> <bonus> <frequency>

Type:

0	Magic	10	Necrotic
1	Fire	11	Divine
2	Cold		
3	Acid		
4	Water		
5	Stone		
6	Lightning		

Number of dice: Number of dice to roll for damage.

Size of dice: Size of dice to roll for damage.

Bonus: Additional points of damage.

Frequency:

OLC

ROOM ARCHETYPE

```
#vnum
Room Title~
Room's Description
~
<zone number> <room flag> <sector type> <house type>
D<direction number>
exit description field
~
door keyword list~
<door type> <key vnum> <exit-to-room vnum>
D<direction number>
exit description field
~
door keyword list~
<door type> <key vnum> <exit-to-room vnum>
{more exits here, if needed}
F
<direction> <speed> <type>
T
<time> <dest room> <make> <counter>
E
extra description keyword list~
extra description
~
E
extra description keyword list~
extra description
~
{more extra desc's as needed}
S
```

TIPS and OBSERVATIONS

- Map it out the rooms on paper first. Be grandiose. As you build, it will usually get smaller anyway!
- When making a DT (deathtrap – a room with a death flag) make exits back to the rooms that lead to it... so people in those rooms can hear the scream. Likewise, it's usually not good to make a death room dark.
- Refrain from using the word "You" as much as possible. Also, avoid describing the people or the events taking place in a room. Ideally, a room should describe the physical characteristics of the room or historical and noteworthy events about the zone as a whole (as a DM would do so when describing a room to his/her adventuring party). Emotions/feelings (“This room is disturbing” or “You fee a chill run up your spine”) should be used

- sparingly if at all, as they invariably lead to overuse of "You." Deathtraps are the only exception to this rule.
- For a working door, the rooms on each side must have matching doors and door flags, and make sure to use the _ (underscore char) when appropriate.
- Make sure all tildes are in their correct position.
- A false door may be achieved by creating a door with a -1 exit-to-room number. This can also be used to create descriptions to look at for a particular direction, such as a balcony. The person certainly cannot go forward off the balcony, but you can still make an exit in that direction with a door of -1. Thus, the person types look north, and can get a description of the view.
- Avoid using extraneous keywords and extra descriptions. The extra descriptions should be used to show detail on important objects that are mentioned in the short description or loaded into the room, not for every little detail that you could possibly imagine.
- When setting the name of a room, you MUST make sure to capitalize your room titles appropriately.
 - Good: Inside the Damp Cavern of Moria
 - Bad: Inside the damp cavern of moria
- When making the room, you must indent the paragraphs with three spaces. Tabs of five are not acceptable. Each line in the description of the room must not exceed 79 characters in length (this includes spaces).
- When making a control room of some kind it should be flagged NOENTRY so it isn't included in the count of rooms to explore.

VII MOBILE FILE

The mob file contains everything the MUD needs to know about the mobs, except for where they are and what they're holding. Each mob in the file is in sequential vnum order. Here's a sample mob file:

```
#2200 Version 4
mob example~
the first example mob~
A first example mob stands here, completely clueless.
~
The example mob looks indistinct, as if it hasn't been completely
fleshed out yet.
~
S acdfg gpzCF g C 0 0
1 20 10 1d6+2 6d6+6 1d4+0
20 13 14 21 21 9 9
10 100 100
10 10 0 2 5
11 272 210 5
#2299 Version 3
mob example~
the second example mob~
A second example mob stands here, completely clueless.
~
The example mob looks indistinct, as if it hasn't been completely
fleshed out yet.
~
T acdfg gpzCF g C 0 0
1 20 10 1d6+2 6d6+6 1d4+0
20 13 14 21 21 9 9
10 100 100
10 10 0 2 5
11 272 210 5
Message to the room.
~
Message to nearby rooms.
```

```
~
>type_prog
Some code
~
>another_prog
Some code
~
|
#999999
$~
```

EXPLANATIONS

#2200 Version 4

This is the vnum of the mob. Read the section on virtual numbers in section III of this document for more information. The Version 3 is important, to identify the format to the MUD. The older formats are also supported but are converted to Version 3 automatically when you use OLC.

mob example~

The [name list](#) of this mob; what words can be used to interact with this mob. For instance, kill mob or kill example would both be valid for this mob. Note the tilde following the field. The first word should be the primary name.

the first example mob~

This is the [short desc](#) of the mob. Used in messages such as, "You poke the Example Mob" or "The Example Mob pounds you!" Note the tilde following the description. Unless the mobile has a specific name, the first word of the short description should be 'the' (lower case). This will ensure consistency and proper grammar.

An example mob stands...

~

This is the [long desc](#) of the mob, used as part of a room description when a player enters or looks in a room. Note the tilde.

The example mob looks...

~

This is the [detailed description](#) of the mob; what a player sees when typing look at the mob. Note that the tilde is on its own separate line.

S acdfg gpzCF g C 0 0

The S stands for the '[load type](#)' of the mob. The first set of characters is the [ACTION flag](#) of the mob, which tell the MUD how the mob should act. The second set of characters is the [AFFECT flag](#), which tells the MUD about any special abilities the mob might have. The third set of characters is the [HATRED flag](#), which tells the MUD which players the mob should attack if the mob is aggressive. An aggressive mob that has no hatreds set is the same as a mob that hates everything. The fourth set of characters is the [AFFECT2 flag](#) which includes affects beyond what would fit in the affections flag. The fifth set of characters are [MOB flag](#) which will be discussed with the mob ACTION flags. The fifth set of characters is the [AFFECT3 flag](#) which includes additional affection flags. (Note: While Affect4 exists on mobs and players, it isn't set-able in the mob file.)

1 20 -100 1d6+2 6d6+6 1d4+0

Field one is the mob's [level](#). The second field is the mob's [hitroll](#) (no longer used). The third field is the mob's [armor value](#). Field four is the mob's [hit points](#). Field five is the mob's [mana points](#). The sixth field is **how much [damage dice and damroll](#)** a mob does with its bare hands.

IMPORTANT: hitpoints, mana, and damroll must be in the format XdY+Z in order to work.

20 13 14 21 21 9 9

These are the [mob's stats](#), in the following order: **str, int, wis, dex, con, cha** (no longer used), **luk**.

10 100 100

The first number is how much [gold this mob is carrying](#). The second is how many [experience points](#) it is worth. The third number is the [alignment](#) of the mob, ranging from 1000 (good) to -1000 (evil).

10 10 0 2 5

The first and second numbers are the [mob's loading and default position](#), respectively. The third and fourth numbers are the mob's [gender and class](#), respectively. The fifth number indicates the [size of the mob](#). (See the tables below for more information about these fields.)

11 272 210 5

These four fields are used to determine how the mob will act. They are: [mob disposition, attack method, special attacks, and the frequency of special attacks](#). Each one is outlined below.

Message to the room.

~

Message to nearby rooms.

~

When a mob is of a type T then there are [sound messages](#) that are sent to the room the mob is in and/or nearby rooms.

>type_prog

Some code

~

|

Optional: only included when there is a [MOBPROG](#). It starts with >, followed by the mob's programs, followed by the ~ on its own line. If there are additional MOBPROGS, then they would also start with a > and end with a ~ on its own line. After the last MPROG ~ then there is a | on its own line.

NOTE: We will not talk about MPROGS or SPECPROCS in this section. See the section on Special Procedures for a short discussion of these.

#999999

\$~

End of the file characters.

OLC

Similar to the world commands you need to be assigned to edit your zone. The basic mob commands are:

MSTAT	This command shows the stats of the mob you are editing.
MOBEDIT	This command is used to edit mobs.
MSET	The command is used to change the stats of the mob you are editing.
MLOAD	Once editing a mob this command allows you to load it into the mud.
MSAVE	This command saves the current mob file you are editing.

MSTAT

This command can give you information about an existing mob using `mstat <mob number>`. An MSTAT of a beastly fido, mob number 3062, will look like this:

Short Desc: a beastly fido, VNum: [3062], RNum: [717], Load room: [-1]

Name: 'beastly fido' (Male MOB) In room [0], Was in room [-1]

Long Desc: A beastly fido is here.

Description: Fido is a small dog that has a foul smell and pieces of rotted meat hanging around his teeth.

```

Class: MOB (0), Race: Tame Animal, Size: average (10), Level[1], HeroPts[0]
Ticks since last load (age) = 0, bonusExp = 0
Exp 5 Gold 0 Align [-200], Ht 191cm, Wt 211lbs
[Temp] Str:[ 7] Int:[ 5] Wis:[ 5] Dex:[ 9] Con:[ 9] Cha:[ 3] Luk:[ 6]
[Real] Str:[ 7] Int:[ 5] Wis:[ 5] Dex:[ 9] Con:[ 9] Cha:[ 3] Luk:[ 6]
[Max ] Str:[17] Int:[15] Wis:[15] Dex:[19] Con:[19] Cha:[ 0] Luk:[16]
Spellfail [0], Skillfail [0], Saves [0/0/0]
Resistances:magic=0% fire=0% cold=0% acid=0% aquatic=0% earth=0% lightning=0%
sonic=0% poison=0% necrotic=0% divine=0% healing=0% bludgeon=0% cut=0% pierce=0%
lacerating=0% constrict=0% mind control=0%
Hp [11/11] 5d3+5, avg 15, Mp [20/20] 10d3+10, avg 30, Sp [73/73]
Pulsetest RegenHp = 1, RegenMp = 1, RegenSp = 1
AC [17], Hitroll/eff [0/-1], Damroll/eff [2/1], 31 in game, killed 14x
Pos [Standing], Default position [Standing]
Carried: weight [0], items [0], Can wear weight [85] Items in: inventory [0], eq
[0]
Attack Method: None, Melee: Bite, Freq:
Mob SpecProc: special_fido, NPC Bare Hand Dam: 1d3, PerishTimer: 0
Use MPSTAT to view mobprogs for this mob.
Load_room = -1, mountbond = None, kill = None, Invis = 0, DetInvis = 0
ACT (MOB_FLAGS) : NPC Wimpy (136, dh)
Hate (HATE_FLAGS): None (0, )
Othr (MOB_OTHER_FLAGS): None (0, )
Mprg: Act
AFF : None ()
AFF2: None ()
AFF3: None
AFF4: None

```

The same mob in the file looks like this:

```

#3062 Version 3
beastly fido~
a beastly fido~
A beastly fido is here.
~
Fido is a small dog that has a foul smell and pieces of rotted meat hanging
around his teeth.
~
S dh 0 0 0 0 0
1 20 9 5d3+5 9d3+9 1d3+2
7 5 5 9 9 3 6
0 5 -200
28 28 1 13 10
0 0 211 0
>act_prog pats 100~
em wags his tail happily.
~
|

```

MOBEDIT or MEDIT

To start to edit your area you enter medit which will begin editing the zone you are in and brings up the following:
Usage: medit (<vnum> | create | save | done | load | allow | deny | delete |
undelelete | default <vnum>)

To create a mob:

- Use `medit default <vnum>` to set your default mob settings to copy the settings of an existing mob.
- Use `medit create <vnum>` to create a new mob like your default.
- Use `medit delete <vnum>` to delete a mob after reboot.
- Use `medit undelete <vnum>` to unmark it for deletion before reboot.

When you are done creating and editing your mobs:

- Use `medit load <vnum>` or `mload <vnum>` to load your newly created mob.
- Use `medit save` or `msave` to save your work.
- Use `medit done` to exit from the mob editor.

MSET

To edit a mob, you need to be in `medit` and use any of the `mset` commands. Plain `mset` brings up the following:

Usage : `mset <field> <value> [field2...]`

Valid fields are:

[alias](#) - mob alias list (ex: `mset alias guard demon`)
[short](#) - short description (ex: `mset short The demon guard`)
[long](#) - long description (seen when you look room)
[detail](#) - detailed description (seen when you look demon)

The fields `alias`, `short`, `long`, and `detail` can't be followed by additional fields.

```
-----+-----
flags      - mob flags          | ac           armor class
affect1    - affect1 flags       | hitpoints    max hitpoints
affect2    - affect2 flags       | loadletter  load type (normal, w/sound, etc)
luck       - luck                 | manapoints  max manapoints
align      - alignment            | damage      damage dice
level      - level                | attacktype  barehand attack type
hitroll    - hitroll              | gold        pocket change
damroll    - damroll              | experience  exp point value
loadpos    - load position        | sex         sex
strength   - strength             | size        size
intel      - intelligence         | wisdom      wisdom
dexterity - dexterity           | con         constitution
          -              | defaultpos  default pos
hates      - hates                | race        race
disposition - class                | attmethod   method of attack
attmelee   - special attacks     | attfreq    How often special is used
sound      - nearby sounds       | distantsnd  sounds heard across rooms
-----+-----
```

`auto` - Options to autobalance mob stats

`mset` will accept multiple fields.

Example Usage: `mset align -500 nocharm invisible`

For detailed field help, use: `mset <field>`

Every field has more information about its formats and flags if you do `mset <command>`.

MSET AUTO

< > `mset auto`

Usage : `mset auto <hp | mp | damage | hitroll | exp | gold | ac | size | stats | all>`

This will automatically adjust a mob's specified stats (or all) based on its level,

race, disposition, special attacks, and flags.

When creating a mob in OLC you should set the following fields and use `mset auto` all for the rest.

Set These	Use MSET AUTO for these
ALIAS OR NAME	HITROLL
SHORT DESCRIPTION	AC
LONG DESCRIPTION	HITPOINTS
DETAILED DESCRIPTION	MANAPOINTS
LOAD TYPE/LETTER	DAMAGE
[OPTIONAL] SOUND AND DISTANTSND	DAMROLL
FLAGS	STRENGTH
AFFECT1	INTEL
AFFECT2	WISDOM
HATES	DEXTERITY
LEVEL	CONSTITUTION
ALIGNMENT	LUCK
LOADPOS	GOLD
DEFAULTPOS	EXPERIENCE
SEX	SIZE
RACE	
DISPOSITION	
ATTTYPE/ATTMELEE	
ATTMETHOD	
ATTFREQ	
AFFECT3	

MLOAD

Used to load a mob you have in the editor into the mud.

MSAVE

Used when you are done editing mobs in your zone and want to save them.

OLC COMMANDS FOR EACH FIELD

Name	<code>mset alias <alias list></code>
Short Description	<code>mset short <mob name></code>
Long Description	<code>mset long <long description></code>
Detailed Description	<code>mset detail</code>
Load Type	<code>mset loadletter < S T X N ></code>
Sound Same Room	<code>mset sound <mob sound></code>
Sound Distant Room	<code>mset distantsnd <mob sound></code>
Action Flags	<code>mset <action flag></code>
Affect Flags	<code>mset <affet1 flag></code>
Hatred Flags	<code>mset <hate flag></code>
Affect2 Flags	<code>mset <affect2 flag></code>
Affect3 Flags	<code>mset <affect3 flag></code>
Level	<code>mset level <mob level></code>
Alignment	<code>mset align <value></code>
Load Position	<code>mset loadpos <position #></code>
Default Position	<code>mset defaultpos <position #></code>
Sex	<code>mset sex <gender></code>
Race	<code>mset race <race></code>
Disposition	<code>mset disposition <type></code>

Attack Type	mset attmelee <type>
Attack Method	mset attmethod <type>
Attack Frequency	mset attfreq <value>
Use MSET Auto	
Hitroll	mset hitroll <value>
AC	mset ac <value>
Hit Points	mset hitpoints XdY+Z
Mana Points	mset manapoints XdY+Z
Damage	mset damage XdY
Dam Roll	mset damroll <value>
Strength	mset strength <value>
Intelligence	mset intel <value>
Wisdom	mset wisdom <value>
Dexterity	mset dexterity <value>
Constitution	mset con <value>
Luck	mset luck <value>
Gold	mset gold <# of coins>
Experience	mset experience <value>
Size	mset size <1-30>

DESCRIPTIONS

Descriptions are done much the same way as those in the section in 'Rooms' earlier in this handbook. However, the placement of tildes is still very important.

ALIASES or NAME

This is the name or alias list of the mob, what words are used to interact with it. The tilde should be at the end of the list and nothing needs to be capitalized. Make the first word the primary name.

Manual

mob first interact~

OLC

You should be set setting this field for your mob.

```
< > mset alias
Usage   :   mset alias <alias list>
```

<alias list> should be a list of names players can use to act on the mob.

Example : mset alias demon guard

SHORT DESCRIPTION

The short desc is used when the mob moves or interacts with players. The tilde needs to follow the description. The first word of the description should be 'the' or 'a' and, unless it's a name, the entire description should be lower case.

Manual

the first example mob~

OLC

< > mset short

Usage : mset short <mob name>
Example : mset short The demon guard

LONG DESC OR DESCRIPTION

The long description is the description of the mob that the players see upon entering the room or looking at the room. The description should be a full sentence with the correct punctuation and the tilde on the following line but shouldn't be longer than a sentence.

Manual

An example mob stands here.
~

OLC

< > mset long
Usage : mset long <mob long description>
A mob's long description is the text you see when it is in it's default position. The first word should be capitalized, and it should end with a period.

Example : mset long A demon duard stands here guarding the portal.

DETAILED DESCRIPTION

The detailed description is what the players see when they look at the mob. The description can be multiple sentences but should be capitalized and contain the correct punctuation. The tilde should be on a separate line after the description.

Manual

This an example of a detailed description of a mob. Notice the complete sentences and the tilde on the following line.
~

OLC

< > mset detail
Existing data found, displaying...

1] This is a mob.

Begin entering your text now (/? = help /s = save /c = clear /l = list)
(The line below is 78 characters - press ENTER before exceeding that length)
-----+

2]

If you type /? You can get the following list of commands.

Special editing commands:

```
-----
/?          display this help list
/l [from] [to] list buffer (or part of it), with line numbers
/ [from] [to] list buffer (or part of it), with line numbers
/n [from] [to] list buffer (or part of it), without line numbers
/c          clear entire edit buffer
/d <line #> delete specified line or current line if none specified
/g <line #> goto line specified
/<line #>   goto line specified
/i <line #> insert line before line specified or before current line if none
specified
/r <old> <new> global search and replace
/a          abort editing without saving
/! <command> execute external command outside of editor
/s          save buffer and exit editor
```

These commands are used to work with editing the mob description. Remember to save your description with /s on a line by itself. Once you have the mob the way you want it, remember to use `medit save` to save your work.

LOAD TYPE (S or T) and SOUNDS

There are two types of mobs currently available: Simple and Talker.

- Simple - The mob doesn't talk. Just follow the standard outline, as described in this outline.]
- Talker - Use this to make mobs speak simple lines of text. It is placed on the last lines below the mob attack types but before the mprogs.

Manual

S or T

The format for the sounds is:

What you want the room to hear.

~

What you want the neighboring rooms to hear.

~

If you don't want one of the messages just omit the line and include the ~:

What you want the room to hear.

~

~

Example:

The captain says, 'Beware ye the rapids. Have ye downstream right quick!'

~

You hear someone grumbling in the distance.

~

OLC

< > mset loadletter

Usage : mset loadletter <format value>

S Simple mobs default attributes

T Simple talker mobs with sound and distant sounds

X Generated mob based on level (not done)
 N Generated mob with sound (not done)
 Current load letter is set to 'S'.

If you make the loadletter a T you need to set the mob's sound and [optional] the mob's distant sounds.

```
< > mset sound
Usage   : mset sound <mod sound>
A mob's sound is what you hear when in the same room
position. The first word should be capitalized, and it should end
with a period. You must also change the mob's loadletter to type talker
and mset distantsnd.
```

Example : mset sound The snake hisses.
 To remove a sound type exactly this: mset sound none

```
< > mset distantsnd
Usage   : mset distantsnd <mod sound>
A mob's sound is what you hear when in an adjoining room
position. The first word should be capitalized, and it should end
with a period. You must also change the mob's loadletter to type talker
and mset sound.
```

Example : mset distantsnd You hear a hiss.
 To remove a sound type exactly this: mset distantsnd none

ACTION, AFFECT, HATRED, AFFECT2, MOB, and AFFECT3 FLAGS

ACTION and MOB flags tell the MUD how a mob behaves, AFFECT, AFFECT2, and AFFECT3 flags tell the MUD what the mob is affected by, and HATRED flags form a list to which the mob is hostile. An aggressive mob that has no hatreds set is the same as a mob that hates everything. These flags are added together in the manner detailed in 'flags', in section III of this handbook or strung together in a list of alpha codes.

Below are lists of flags for each type, with descriptions of what each does:

Manual

Action Flags

1	a	SPEC	IMPORTANT: Must be set. If using OLC, it is set automatically.
2	b	SENTINEL	This mob does not wander.
4	c	SCAVENGER	This mob picks up objects it can see lying on the ground.
8	d	IS NPC	IMPORTANT: Must be set. If using OLC, it is set automatically.
16	e	NICE THIEF	Will not attack a player trying to steal from it.
32	f	AGGRESSIVE	Automatically attacks player it can see.
64	g	STAY ZONE	Will not enter a room with a different zone number than its own.
128	h	WIMPY	Will flee when hurt badly.
256	i	MEMORY	This mob will remember players who have attacked it and will be aggressive to them if it sees them again.
512	j	HELPER	Mob helps other mobs against players.
1024	k	HUNTER	This mob will hunt the player that attacked it last.
2048	l	RESIST POUND	Mob is more resistant to bludgeoning weapons.
4096	m	TRAINER	Mob is a trainer. Requires approval.
8192	n	CLOSER	Mob closes doors he encounters.
16384	o	LOCKER	Mob will lock doors he encounters.

32768	p	TAUNTER	Mob will taunt players.
65536	q	NOATTACK	Mob cannot be attacked. Will not be included in total mobs to defeat count.
131072	r	NO BODYPARTS	Player can't use vorpal to chop off the mob's body parts.
262144	s	HIRER	Mob will tell other mobs who attacked them last.
524288	t	HIREE	Mob can be told by HIRER mobs who to attack.
1048576	u	OPENER	Mob will open unlocked doors.
2097152	v	AMBUSER	Mob will ambush players that walk in their room.
4194304	w	BLOCKER N	Mob will block exit north.
8388608	x	BLOCKER E	Mob will block exit east.
16777216	y	BLOCKER S	Mob will block exit south.
33554432	z	BLOCKER W	Mob will block exit west.
67108864	A	BLOCKER U	Mob will block exit up.
134217728	B	BLOCKER D	Mob will block exit down.
268435456	C	QUESTMOB	Mob can send players on a quest. Requires approval. See section X, Quest
536870912	D	MAGIC RESIST	Mob is highly resistant to magic affects.
1073741824	E	RESIST SLASH	Mob is more resistant to slashing weapons.
2147483648	F	RESIST PIERCE	Mob is more resistant to piercing weapons.

Note: For any alignment, class, or racial aggressions to work, the initial AGGRESSIVE flag (32 or f) must be set.

Affection Flags

0	-	NONE	None
1	a	FIRESHIELD	Mob will be affected by 'fireshield.' Permission is required..
2	b	INVISIBLE	Mob is invisible.
4	c	DETECT EVIL	Mob can detect evil players.
8	d	DETECT INVIS	Mob can see invisible players.
16	e	DETECTMAGIC	Mob can see magic.
32	f	SENSE LIFE	Mob can detect a hidden player, but not enough to see to attack.
64	g	SENSE OBJECT	Mob will be able to detect hidden objects.
128	h	SANCTUARY	Mob will be affected by 'sanctuary.'
256	i	FAERIE FIRE	Mob will be affected by 'faerie fire.'
512	j	BLUR	Mob will be affected by 'blur'.
1024	k	WRAITHFORM	Cannot bash, trip, or leg sweep this mob, also lowers ARMOR by 20.
2048	l	NO ARM R	Reserved, do not use.
4096	m	NO ARM L	Reserved, do not use.
8192	n	NO LEG R	Reserved, do not use.
16384	o	NO LEG L	Reserved, do not use.
32768	p	INFRAVISION	Mob can see in the dark.
65536	q	NO FOOT R	Reserved, do not use.
131072	r	DODGE	Mob will dodge attacks.
262144	s	SNEAK	Mob cannot be seen entering or leaving a room.
524288	t	HIDE	Mob is hidden.
1048576	u	NO FOOT L	Reserved, do not use.
2097152	v	CHARMED	Overrides certain behaviors and it can't be charmed again
4194304	w	NO HAND R	Reserved, do not use.
8388608	x	NO HAND L	Reserved, do not use.
16777216	y	VIGOR	Mob will be affected by 'vigor.'
33554432	z	HASTE	Mob will be affected by 'haste.'
67108864	A	FLY	Mob will be affected by 'fly.'
134217728	B	PRIVATE	You cannot portal or dimension door to this mob.
268435456	C	SEE LIFEFORM	Mob can see hidden players.
536870912	D	AQUA LUNG	Mob can breathe underwater.
1073741824	E	MOUNT	Mob is usable as a mount.

2147483648	F	UNHOLY AURA	Mob will be affected by 'unholy aura'.
------------	----------	-------------	--

Hatred Flags

0	-	NONE	65536	q	HATE MALE
1	a	HATE EVIL	131072	r	HATE FEMALE
2	b	HATE GOOD	262144	s	<i>HATE NECROMANCER</i>
4	c	HATE NEUTRAL	524288	t	HATE ALL > LEVEL
8	d	HATE ROGUE	1048576	u	HATE ALL < LEVEL
16	e	HATE FIGHTER	2097152	v	HATE OGRE
32	f	HATE MAGIC USER	4194304	w	HATE GNOME
64	g	HATE PRIEST	8388608	x	HATE MINOTAUR
128	h	HATE DWARF	16777216	y	HATE ORC or HALF ORC
256	i	HATE ELF	33554432	z	HATE GOBLIN
512	j	HATE HUMAN	67108864	A	HATE DROW
1024	k	HATE PIXIE	134217728	B	HATE DUERGAR
2048	l	HATE HALFLING	268435456	C	HATE ELДАР
4096	m	HATE TROG	536870912	D	HATE KENDER
8192	n	HATE HALF-ELF	1073741824	E	HATE TROLL
16384	o	HATE MONASTIC	2147483648	F	<i>HATE PALADINS</i>
32768	p	<i>HATE DRUIDS</i>			

Affection2 Flags

0	-	NONE	None
1	a	NOLUNGS	Mobs cannot leave aqualung rooms.
2	b	SILENCE	Can't speak, cast, or recite scrolls.
4	c	AUTO SNEAK	Mob sneaks.
8	d	DEAF	Mob cannot hear.
16	e	<i>FAMILIAR</i>	<i>Reserved, do not use.</i>
32	f	CALM	Just as if this spell had been cast on the mob.
64	g	WITHER	Just as if this spell had been cast on the mob.
128	h	RAGE	Just the same as if the mob was using the skill.
256	i	STONE WALK	Can move in mountain terrain.
512	j	WATER WALK	Can move in water terrain.
1024	k	<i>GROUP</i>	<i>Reserved, do not use.</i>
2048	l	CURSE	Just as if this spell had been cast on the mob.
4096	m	WARPAINT	Just as if the skill was used by the mob.
8192	n	AWARENESS	Just the same as if the mob was using the skill.
16384	o	<i>FOLLOW</i>	<i>Reserved, do not use.</i>
32768	p	<i>BASH1</i>	<i>Reserved, do not use.</i>
65536	q	<i>BASH2</i>	<i>Reserved, do not use.</i>
131072	r	POISON	Just as if this spell had been cast on the mob.
262144	s	PROTECT EVIL	Just the same as if the mob was using the spell.
524288	t	PARALYSIS	Just as if this spell had been cast on the mob.
1048576	u	SLEEP	Just as if this spell had been cast on the mob.
2097152	v	FEAR	Just as if this spell had been cast on the mob.
4194304	w	PROTECT DEATH	Won't enter deathtraps.
8388608	x	BLIND	Just as if this spell had been cast on the mob.
16777216	y	GRAPPLE	Just as if this skill had been used on the mob.
33554432	z	MAGIC RESISTANC	Mob is resistant to magic.
67108864	A	SLOW	Just as if this spell had been cast on the mob.
134217728	B	<i>CHEAT DEATH</i>	<i>Reserved, do not use.</i>

268435456	C	BLOODLUST	Just the same as if the mob was using the spell.
536870912	D	PROTECT GOOD	Just the same as if the mob was using the spell.
1073741824	E	DETECT GOOD	Just the same as if the mob was using the spell.
2147483648	F	AFAMILIAR	<i>Reserved, do not use.</i>

Mob Flags

0	a	NOBWEAP	Mob will not load a blue weapon
1	b	RICH	Mob has extra gold.
2	c	NOGOLD	Mob has no gold.
4	d	STAY SECTOR	Mob will stay in its zone when wandering.
8	e	SLOW WANDER	Mob will wander but a one third speed.
16	f	BOSS	Mob has an increased chance of giving qpoints.
32	g	LOWEXP	Mob has less experience.
64	h	HIGHEXP	Mob has higher experience.
128	i	POISON BITE	Mob will have poison in its bite.
256	j	VAMP DRAIN	Mob will use vampiric drain
512	k	MANA DRAIN	Mob will drain the mana of players.
1024	l	ARCHER	Shoots arrows into a random outside room in the same zone.
2048	m	RESIST FIRE	Mob is resistant to fire attacks.
4096	n	RESIST COLD	Mob is resistant to cold attacks.
8192	o	RESIST ACID	Mob is resistant to acid attacks.
16384	p	RESIST NECROTIC	Mob is resistant to necrotic attacks.
32768	q	RESIST DIVINE	Mob is resistant to divine attacks.
65536	r	RESIST MENTAL	Mob is resistant to mental attacks.
131072	s	RESIST POISON	Mob is resistant to poisons.
262144	t	RESIST SONIC	Mob is resistant to sonic attacks.
524288	u	RESIST TERRA	Mob is resistant to earth attacks.
1048576	v	RESIST AQUATIC	Mob is resistant to water attacks.
2097152	w	RESIST LIGHTNING	Mob is resistant to lightning attacks.
4194304	x	VULN FIRE	Mob is vulnerable to fire
8388608	y	VULN COLD	Mob is vulnerable to cold
16777216	z	VULN ACID	Mob is vulnerable to acid
33554432	A	VULN NECROTIC	Mob is vulnerable to necrotic
67108864	B	VULN DIVINE	Mob is vulnerable to divine
134217728	C	VULN SONIC	Mob is vulnerable to sonic
268435456	D	VULN TERRA	Mob is vulnerable to terra
536870912	E	VULN AQUATIC	Mob is vulnerable to aquatic
1073741824	F	VULN_LIGHTNING	Mob is vulnerable to lightning

Affection3 Flags

1	a	DIVINE SHIELD	
2	b	WEIGHT OF FAITH	
4	c	ENTANGLE	
8	d	INVIS UNDEAD	
16	e	STONESKIN	
32	f	DISEASE	
64	g	IT	
128	h	DEFENDED	
256	i	VAMPIRISM	
512	j	LYCANTHROPY	
1024	k	CLAN INVIS	
2048	l	MIRROR IMAGE	

4096	m	CORPSE VISAGE	
8192	n	ON QUEST	
16384	o	QUEST DELAY	
32768	p	SENSE UNDEAD	
65536	q	RESIST FIRE	
131072	r	RESIST LIGHTNING	
262144	s	RESIST COLD	
524288	t	GRIM WARD	
1048576	u	DELAY	
2097152	v	SOULTAP	
4194304	w	BLADE BARRIER	
8388608	x	STASIS	
16777216	y	HAS WINGS	
33554432	z	HAS TAIL	
67108864	A	HAS TENTACLE	

OLC

Action and Mob Flags

< > mset flags

Usage : mset <action flag>

This will toggle the flag you specify.

Valid action flags are:

sentinel	scavenger
aggressive	nicethief
stayzone	wimpy
memory	helper
hunter	trainer
ambusher	taunter
blockerN	blockerE
blockerS	blockerW
blockerD	blockerU
opener	closer
nobodyparts	staysector
noblueweapon	rich
nogold	slowwander
locker	noattack (mob can't be attacked)
questmob (don't set unless you have quest data)	
boss	lowexp
highexp	poisonbite
vampdrain	manadrain
archer	resistfire
resistcold	resistacid

Example : mset sentinel
 mset stayzone nobash

Affection Flags

< > mset affect1

Usage : mset <affect1 flag>

This will toggle the flag you specify.
Valid affect flags are:

fireshield	invisible
detevil	detinvis
detmagic	senselife
senseobj	sanctuary
fairyfire	infravision
dodge	sneak
hide	charm
vigor	haste
fly	private
seelife	aqualung
mount	unholyaaura
wraithform	magicresistant
resistpound	resistslash
resistpierce	

Example : mset invisible
 mset senselife infravision

Hatred Flags

< > mset hates
Usage : mset <hate flag>

This will toggle the flag you specify.
Valid hate flags are:

hateevil	hatehuman
hategood	hatepixie
hateneutral	hatehalfing
haterogue	hatetrog
hatefighter	hatehalfelf
hatemagicuser	hatemonastic
hatepriest	
hatedwarf	hatemale
hateelf	hatefemale
hateneuter	hateabove
hatebelow	hateogre
hategnome	
hateminotaur	hatetroll
hatehalforc	hatekender
hategoblin	hateeldar
hatedrow	hateduergar

Example : mset hateabove
 mset hateelf hatecleric

Affection2 Flags

< > mset affect2
Usage : mset <affect2 flag>

This will toggle the flag you specify.
Valid affect flags are:

nolungs	silence
autosneak	deaf
familiar (don't set)	calm
wither	rage
stonewalk	waterwalk
group (don't set)	curse
loose (NIU don't set)	awareness
follow (don't set)	bash1 (don't set)
bash2 (don't set)	poison
protectfromevil	paralysis
sleep	fear
protectfromdeath	blind
grappled	magicresistance
slow	cheatdeath (don't set)
bloodlust	protectfromgood
detectgood	afamiliar (don't set)

Example : mset invisible
 mset senselife infravision

Affection3 Flags

< > mset affect3
 Usage : mset <affect3 flag>

LEVEL, HITROLL, and ARMOR CLASS

Level is a generic and general measure of the mob's overall power. The mob's level should also reflect its challenge to characters of around the same level. Since most builders already have a player level range in mind when they build an area, we've provided basic equations, which are based on mob level.

Hitroll, as of right now, is not used on mobs so **DO NOT** put any ridiculous number in this field.

A generic equation for THAC0 is: $20 - \langle \text{mob level} \rangle$

Armor Class determines how hard it is to hit the mob and how much damage is done to the mob per swing. AC is factored the same way it is for characters, so anything below -500 will be rounded to -500.

A generic equation for AC is: $100 - (10 \times \langle \text{mob level} \rangle)$

Manual

See Explanations above.

OLC

In the OLC, only enter the mob's level. Hitroll and AC are set with MSET AUTO based on other settings on the mob.

< > mset level
 Usage : mset level <mob level>

< > mset hitroll
 Usage : mset hitroll <value>

< > mset ac

Usage : mset ac <value>

HITPOINTS, MANAPOINTS, and DAMAGE

The functions of hit points, mana points, and damage are arrayed randomly by the MUD, as a function of imaginary dice and bonuses. These always follow the form $x dy+z$, where x is the imaginary amount of dice, y is how many sides these dice have, and z is a constant being added to the final total.

For example, our example mob had hit points of $1d6+2$: a random number between 1 and 6, then add 2, for a range of 3-8. Another mob might have $10d10+150$ for a range of 160-250. Mana points and damage are calculated the same way.

These fields must follow the form $x dy+z$, even if z equals 0! For instance, our example mob does $1d4+0$ damage with its bare hands.

A generic equation for HIT POINTS and MANA is: $\langle \text{mob level} \rangle d 20 + \langle \text{mob level} \rangle * \langle \text{mob level} \rangle$

A generic equation for DAMAGE is: $\langle \text{mob level} \rangle / 10 + 1 d Y + \langle \text{mob level} \rangle / 2$

Manual

See Explanations above.

OLC

In the OLC, do not set any of these fields. All of them are set with MSET AUTO based on other settings on the mob.

< > mset hitpoints

Usage : mset hitpoints $XdY+Z$

Example : mset hitpoints $2d4+30$

< > mset manapoints

Usage : mset manapoints $XdY+Z$

Example : mset manapoints $2d4+30$

< > mset damage

Usage : mset damage XdY

Example : mset damage $2d5$

< > mset damroll

Usage : mset damroll <value>

NOTE: While in the manual process you enter $XdY+Z$ for damage, in the OLC this is two separate entries `mset damage` for the XdY and `mset damroll` for the $+Z$.

STATISTICS

This is where you set the mob's STrength, INTelligence, WISdom, DEXterity, CONstitution, CHARisma and LUCK. The stats can affect the mob's behaviors. E.g. how easy it is to disarm it.

Note: The range is 1 to 30. Racial modifiers are not applied.

Additional Note: We have removed Charisma from the game, but the field still exists in the mob file and needs to be included when manually creating mobs.

Manual

See Explanations above.

OLC

In the OLC, do not set any of these fields. All of them are set with MSET AUTO based on other settings on the mob.

```
< > mset strength
Usage   : mset strength <strength>
```

```
< > mset intel
Usage   : mset intel <intelligence>
```

```
< > mset wisdom
Usage   : mset wisdom <wisdom>
```

```
< > mset dexterity
Usage   : mset dexterity <dexterity>
```

```
< > mset con
Usage   : mset con <constitution>
```

```
< > mset luck
Usage   : mset luck <#>
```

GOLD and EXPERIENCE

Gold per mob is up to the author although it should be a rational amount and make sense. (A dragon or wizard would be expected to have a huge amount of gold, but a wolf or a snake would not carry any.) In addition, mobiles that are found in their lair typically have a much greater amount of treasure than mobs that wander around. Please keep this in mind.

A generic equation for GOLD is: $10 * \langle \text{mob level} \rangle * \langle \text{mob level} \rangle$

Experience should be an accurate assessment of the difficulty of the mob. It should be reasonably set: if it is set too low, players will avoid the mob in search of others which are more rewarding; if set too high, players will find easy reward for less of a challenge.

A generic equation for EXPERIENCE is: $N * \langle \text{mob level} \rangle * \langle \text{average hit points} \rangle$, where N varies as follows:

- 6 **RARE!** All the flags of a type 5, plus helpers, memory, extraordinarily difficult to get to/find.
- 5 Many helpful flags such as SANCT, VIGOR, HASTE, DODGE, etc.
- 4 Only a few of the flags listed above.
- 3 No flags.
- 2 A couple detrimental flags such as WIMPY, or low hit points, damage, etc.
- 1 Several flags which make the mob very lame.

Note: Over the years, the amount of experience increased. Please research the current limits and set them accordingly for your mobs. In general, players under level 50 should not be getting a rate of 50 million experience points per 24 ticks.

Manual

See Explanations above.

OLC

In the OLC, do not set any of these fields. All of them are set with MSET AUTO based on other settings on the mob.

< > mset gold

Usage : mset gold <number of coins>

< > mset experience

Usage : mset experience <exp value of mob>

ALIGNMENT

Alignment varies from 1000 to -1000 and allows for three dispositions:

Alignment should be rationally set according to the mob. For example, a mob with the flags of aggressive and hate_good and with an alignment of 1000 does not make sense.

Manual

See Explanations above.

OLC

< > mset align

Usage : mset align <value>

POSITION

A mob always has two position numbers: its loading position and its default position. A mob will be loaded into its loading position initially but will move to its default position. Note that these do not have to be the same, but usually are.

Manual

The valid positions are:

8	SLEEPING	14	KNEELING	28	STANDING
10	RESTING	16	MEDITATING	30	FLYING
12	CRAWLING	18	SITTING	32	SWIMMING

There is also a defaultposition of position_none, value -1, (it cannot be set as a load position), that is useful for mobs whose position is controlled by mobprogs or spec-procs. A mob with position_none will remain in the last position he was in until a prog or proc or MUD-event causes it to change. (For example, an aggressive mob might be loaded as sleeping, and would remain sleeping until attacked or woken, and then would be aggressive, and would not return to sleep.)

OLC

< > mset loadpos

Usage : mset loadpos <starting position od mob>

Valid positions are:

8 sleeping

10 resting

12 crawling
 14 kneeling
 16 meditating
 18 sitting
 28 standing
 30 flying
 32 swimming

< > mset defaultpos

Usage : mset defaultpos <position mob takes after fighting>

Valid positions are:

-1 none
 8 sleeping
 10 resting
 12 crawling
 14 kneeling
 16 meditating
 18 sitting
 28 standing
 30 flying
 32 swimming

Note that when the mob is in its default position, looking at the room will show the mob's long description.

SEX and RACE

Manual

The following sexes are available:

0	NEUTRAL	1	MALE	2	FEMALE	3	RANDOM
----------	---------	----------	------	----------	--------	----------	--------

The following mobile races are available.

0	IMMORTAL	Default.
1	UNDEAD	Can be turned, immune to sleep, charm. Can see in dark
2	HUMAN	The standard, average race.
3	ANIMAL WILD	Resists charming. Can see in the dark. Affect: No hands, no arms, Affect3: has a tail
4	DRAGON	Breath attack, usable as mount. Can see in the dark. Affect3: has wings and tail.
5	GIANT	Hill giants, frost giants. Skilled at barge.
6	INSECT	Includes Spiders. Cannot be charmed. Can see in the dark.
7	WATER BASED	Water elementals. Can see in the dark.
8	AIR BASED	Air elementals. Can see in the dark.
9	PLANT	Trees, ents. Can see in the dark.
10	MINERAL	Some form of naturally living stone. Can see in the dark.
11	COLD BASED	Susceptible to heat attacks and resistant to cold attacks. Can see in the dark.
12	HEAT BASED	Susceptible to cold attacks and resistant to fire. Can see in the dark.
13	ANIMAL TAME	Easier to charm. Can see in dark. Affect: No hands, no arms, Affect3: has tail
14	CONSTRUCT	Golem, enchanted armor, etc. Can see in the dark.
15	ETHEREAL	Mob is transparent. Can see in the dark.
16	DWARF	Has infravision, skilled at gem cutting, resistance to poison. Skilled at edged unless priest and then skilled at blunt.

17	ELF	Has infravision and sense life, skilled at ranged
18	PIXIE	Affect: fly, Affect3: has wings
19	HALFLING	Skilled at sneak and ranged.
20	TROGLODYTE	Has infravision and aqua lung. Skilled at swim.
21	HALF-ELF	Has infravision. Skilled at ranged.
22	OGRE	Can eat corpses.
23	GNOME	Has infravision.
24	MINOTAUR	Skilled at gore.
25	HALF-ORC	No abilities.
26	DROW	Has infravision and sense life. Resistance to magic. Can see in the dark.
27	DUERGAR	Has infravision, skilled at gem cutting, resistance to poison, magic, and terra
28	TROLL	Improved hit point regeneration, resistance to fire
29	GOBLIN	Skilled at sneak and peak.
30	KENDER	Skilled at steal, peek, and ranged.
31	ELDAR	Improved mana regeneration
32	DEMON	Resistant to magic, sonic, poison, and necrotic. Can see in the dark.
33	SKELETON	Bony mobs.
34	ZOMBIE	Reanimated corpses.
35	VAMPIRE	Blood suckers.
36	GHOST	Ghosts.
37	WRAITH	Special ghost.
38	LICH	Undead creature. Resistant to magic.
39	MUMMY	Reanimated corpses.
40	SNAKE	Affect: no legs, no arms, no hands, no feet. Affect3: has tail
41	FISH	Can swim. Affect: aqua_lung, no arms, no legs, no hands, no feet. Affect2: has tail and no lungs.
42	BIRD	Affect: no arms, no hands. Affect3: has tail and wings.
43	WEREWOLF	Human until night when they polymorph. Susceptible to silver weapons.

Chat OLC

```
< > mset sex
Usage   : mset sex <gender>
```

```
Valid genders are:
  neuter (it)
  male
  female
  random (different every load)
```

```
< > mset race
Usage   : mset race <type>
```

```
Valid attack races are:
```

```
0      Immortal
1      Undead
2      Human
3      Animal Wild
4      Dragon
5      Giant
6      Insect
7      Water
8      Air
```

9	Plant
10	Mineral
11	Cold
12	Heat
13	Animal Tame
14	Construct
15	Ethereal
16	Dwarf
17	Elf
18	Pixie
19	Halfling
20	Troglodyte
21	Halfelf
22	Ogre
23	Gnome
24	Minotaur
25	Half-orc
26	Drow
27	Duergar
28	Troll
29	Goblin
30	Kender
31	Eldar
32	Demon
33	Skeleton
34	Zombie
35	Vampire
36	Ghost
37	Wraith
38	Lich
39	Mummy
40	Snake

SIZE

The size of the mobile.

Manual

0	<i>NONE (do not use)</i>	9	MEDIUM (elf)	18	GIANT
1	MICROSCOPIC	10	AVERAGE (human)	19	IMMENSE
2	MINISCULE	11	BIG (orc)	20	ENORMOUS
3	MINIATURE	12	VERY BIG (trog, minotaur)	21	HUMONGOUS
4	LILLIPUTIAN	13	LARGE	22	GIGANTIC
5	TINY (pixie)	14	GREAT (troll)	23	TITANIC
6	WEE (kender)	15	MASSIVE (ogre)	24	COLOSSAL
7	LITTLE (halfling, gnome, goblin)	16	HULKING	25	GARGANTUAN
8	SMALL (dwarf, duergar)	17	HUGE		

OLC

In the OLC, do not set this field. It is set with MSET AUTO based on other settings on the mob.

< > mset size

Usage : mset size <1-30>

MOB DISPOSITION, ATTACK METHOD, SPECIAL ATTACKS, AND SPECIAL ATTACK FREQUENCY

Mob Disposition is the general disposition of the mob and dictates any special skills that the mob might have. For example, a mob with a thief disposition will steal coins, dodge and gouge in combat, and backstab if aggressive.

Special Attack is a generic special attack form that the mobile may utilize. This is useful particularly for giving a dragon type mob a breath weapon.

Melee Attack changes the combat messages to a different primary attack type. Default is 'hit.'

Frequency is a frequency counter, which dictates how often the special attack is used. A **FREQ** value of 1 would cause the special attack to occur once a round, while a frequency value of 10 would cause the special attack to occur once every 10 rounds (on the average).

Manual

The following dispositions are available:

0	NONE	8	NECROMANCER	16	WIZARD
1	MAGE	9	SHAMAN	17	PROPHET
2	PRIEST	10	ASSASSIN	18	DEMONIAC
3	ROGUE	11	SAMURAI	19	BARD
4	FIGHTER	12	SORCERER	20	DREADLORD
5	DRUID	13	RANGER	21	BARBARIAN
6	MONK	14	OCCULTIST	22	MONASTIC
7	PALADIN	15	TEMPLAR	23	ELEMENTALIST

The available special attack methods are:

259	WING BASH	267	LIGHTNING BREATH	275	UNDEAD BITE
260	DEATHWIRL	268	BODYSLAM	276	TENTACLE 2
261	SPIT ACID	269	MANA DRAIN	277	TALONS
262	THROW ROOM	270	SHRIEKER	278	POISON GAS
263	FIRE BREATH	271	GLARE PARA	279	BIRD BEAK
264	GAS BREATH	272	CHILLING TOUCH	280	VENOM BITE
265	FROST BREATH	273	TAIL DAMAGE	281	BACKSTAB
266	ACID BREATH	274	RAZOR CLAWS		

Other melee messages are:

200	HIT	207	TORCH	214	HOOF
201	POUND	208	HACK	215	TENTACLE
202	PIERCE	209	LANCE	216	HORNS
203	SLASH	210	CLAW	217	BLOOD
204	CRUSH	211	BITE	218	SHOCK
205	WHIP	212	STING	219	FLAMING SWORD
206	POLEARM	213	CONSTRICT		

OLC

```
< > mset disposition
Usage   : mset disposition <type>
```

Valid dispositions are:

0	None
1	Mage
2	Priest
3	Rogue
4	Fighter
5	Druid
6	Monk
7	Paladin
8	Necromancer
9	Shaman (not done)
10	Assassin
11	Samurai
12	Sorcerer (not done)
13	Ranger
14	Occultist (not done)
15	Templar
16	Wizard
17	Prophet
18	Demoniac
19	Bard
20	Dreadlord
21	Barbarian
22	Monastic
23	Elementalist (not done)

< > mset attmethod

Usage : mset attmethod <type>

Valid attack method are:

260	Deathtwirl
261	Spit Acid
262	Throw Room
263	Fire Breath
264	Gas Breath
265	Frost Breath
266	Acid Breath
267	Lightning Breath
268	Bodyslam
269	Mana Drain
270	Shrieker
271	Glare
272	Chilling Touch
273	Tail Damage
274	Razor Claws
275	Undead Bite
276	Tentacle
277	Talons
278	Poison Gas
279	Bird Beak
280	Venom Bite
281	Backstab
282	Grapple

< > mset attmelee

Usage : mset attmelee <type>

Valid attack melees are:

200	Hit
201	Pounds
202	Pierces
203	Slashes
204	Crushes
205	Whips
206	Polearm
207	Torch
208	Hack
209	Lance
210	Claw
211	Bite
212	Sting
213	Constrict
214	Hoof
215	Tentacle
216	Horns
217	Blood
218	Shock
219	Burn

MOB ARCHETYPE

```
#vnum Version 3
name list~
short desc~
long desc
~
mob desc
~
<S|T> <action flags> <affection flags> <hatred flags> <affection2 flags> <mob
flags>
<level> <thac0> <ac> <hit points> <mana points> <damage>
<str> <int> <wis> <dex> <con> <cha> <luk>
<gold> <experience> <alignment>
<loading position> <default position> <gender> <race> <size>
<disposition> <special attack> <melee message> <frequency>
<message seen in room>
~
<message seen in connecting rooms>
~
>type_prog
Some code
~
|
```

TIPS and OBSERVATIONS

- Angry mobs can be simulated by loading them with a default position of sitting and aggressive. After being attacked, they will wander around awhile before sitting back down! Other interesting things can be done with the position values as well.
- Make sure you spend some time looking at other mobs so to get a feel of what your mobs will be like. If you need

stats of other mobs, ask the Head Builder for this information.

- Shopkeepers should be level 75 or higher to prevent theft. In addition, setting the NICE THIEF bit will eliminate thievery as a way of starting combat with the shopkeeper. If you are comfortable with mobprogs, you may write one for an interesting mob reaction and nasty surprise for the thief!
- Mobs with mixed dispositions can be simulated with mprogs. See section XIII for more details.
- Many builders use a central control mprog mob to run their zone. When this is done, the mob should be a race immortal and flagged NOATTACK so that it is easy to find and isn't included in the mobs to defeat count.

VIII OBJECT FILE

An object is any item in the game, be it unmovable rock, the fountain in Market Square, or that nice sword Joe the Barbarian has. Everything the MUD needs to know about objects can be found in the .obj file, except for where they actually are.

Here is an example object, followed by a line-by-line breakdown:

```
#2200 Version 4
sword example~
an example sword~
An example sword lies on the ground.~
~
5 an g b e 33
0 3 6 203 0 0
5 1000 100 10
E
sword example~
It looks very shiny and polished, as if someone is taking care to try to make a
good example.
A
1 1
#2299 Version 4
sword example~
an example sword~
An example sword lies on the ground.~
~
5 an g b e 33
0 3 6 203 0 0
5 1000 100 10
E
sword example~
It looks very shiny and polished, as if someone
is taking care to try to make a good example.
~
M
>command_prog
some commands
~
|
#99999
$~
```

EXPLANATIONS

#2200 Version 4

The Version 4 is important, to identify the format to the MUD. The older formats are also supported but are converted to Version 4 automatically when you use OLC.

sword example~

The [name list](#) of the object: what words can be used to manipulate the object. In this case, either of the words 'sword' or 'example' can be used in conjunction with a wield, drop, take, etc.

an example sword~

[Short description](#). This is seen when the object is the target of a command: 'You wield an example sword.' 'You give an example sword to...'. Unless the object has a specific name, the short description should start with either 'a', 'an', or 'the' (lower case). This will ensure consistency and proper grammar.

An example sword lies on the ground.~

The [long description](#). This is what a player sees if the object is lying in a room by itself. Note the position of the tilde here. Unlike long descriptions for mobs, the long description of an object sends an automatic carriage return.

~

This was the [action description](#) and is NOT used anymore. A tilde on the line by itself is still required.

5 an g b e 33

The first number is what [type of object](#) this is; in this case a weapon. The second set of characters is the [wear flag](#) of the item, a flag that tells the MUD where the item can be worn on a player or mob. The third set of characters is the [extra flag](#). The fourth set of characters is the [composition flag](#). This flag serves as a list of what the object is made of. The fifth set of characters is the [anti flag](#). This flag tells the MUD who may not use this object. The sixth set of characters is the [minimum level required](#) to use the object. See all tables below.

0 3 6 203 0 0

These are the [values\[0\] through \[5\]](#) of the object. What each number means is completely dependent on what type of object it is. See 'object values' below.

5 1000 100 10

The first number is the [weight](#) of the object. The second field is the [value of the object](#), in gold coins. The third field is the [rent value](#) of the object, or how much it costs to rent this item per day in gold coins (currently, this has no meaning, since rent is free). The last field indicates the [size of the item](#).

E

sword example~

It looks very shiny and polished, as if someone is taking care to try to make a good example.

~

This is an [extra description](#) and behaves EXACTLY like the extra descriptions of rooms. See section VI of this handbook for more information.

A

1 1

These are '[affects' of the weapon](#)'; the A signifying that an **affect is forthcoming**. The second digit is the **type of affect**, and the third **how much** the affect is worth (either positive or negative). See 'affects' below.

M

>command_prog

some commands

~

|

Optional: only included when there is a [MOBPROG](#). It starts with M signifying that an mprog is forthcoming, then >, followed by the object's programs, followed by the ~ on its own line. If there are additional MOBPROGS, then they would also start with a > and end with a ~ on its own line. After the last MPROG ~ then there is a | on its own line.

NOTE: We will not talk about MPROGS or SPECPROCS in this section. See the section on Special Procedures later

for a short discussion of these.

#999999

\$~

End of the file characters.

OLC

Similar to the world and mob commands you need to be assigned to edit your zone. The basic object commands are:

OSTAT	This command shows the stats of the object you are editing.
OEDIT	This command is used to edit objects.
OSET	The command is used to change the stats of the object you are editing.
OLOAD	Once editing an object this command allows you to load it into the mud.
OSAVE	This command saves the current object file you are editing.

OSTAT

This command can give you information about an existing object using `ostat <object number>`. An OSTAT of the steps of Midgaard Temple, object number 3079, will look like this:

```
Short Description: 'the steps of Midgaard Temple', Name (aliases): steps temple
VNum: [3079], RNum: [1010], InRoom(real): -1, Type: Other, SpecProc: None
L-Des: A set of solid stone steps lead out from the Temple.
```

```
Extra Description Keywords: steps = The large steps are made of granite bricks
and are smoothly
worn from continuous use. All are welcome on the steps of
Midgaard Temple and if you are lucky, the Gods will ease your
weary body with accelerated healing.
```

Can be worn on: None

Set char bits : None

Extra flags : Bless Plural , ip

Composition flags: Mineral , c

Restriction flags: None

Minimum Levels:

```
Mage      : 0  Priest      : 0  Rogue      : 0  Fighter    : 0
Druid     : 0  Monk       : 0  Paladin    : 0  Necromancer: 0
Assassin  : 0  Samurai   : 0  Ranger     : 0  Templar    : 0
Wizard   : 0  Prophet   : 0  Demoniac   : 0  Bard       : 0
Dreadlord: 0  Barbarian : 0  Monastic   : 0
```

Size: gargantuan (25), Weight: 1000, Value: 90, Cost/day: 0, Timer: 0

In room: Nowhere, In object: None, Carried by: Nobody, Worn by: Nobody

Value[0]: 0 Value[1]: 0 Value[2]: 0

Value[3]: 0 Value[4]: 0 Value[5]: 0

Values 0-5: [0] [0] [0] [0] [0] [0]

Equipment Status: None

Owner: unowned

Mprg: None

Object Affects:

+5 StaminaRegen (apply #83)

+3 HitpointRegen (apply #82)

The same object in the file looks like this:

```

#3079 Version 4
steps temple~
the steps of Midgaard Temple~
A set of solid stone steps lead out from the Temple.~
~
12 0 ip c 0 0
0 0 0 0 0 0
1000 0 0 25
E
steps ~
The large steps are made of granite bricks and are smoothly
worn from continuous use. All are welcome on the steps of
Midgaard Temple and if you are lucky, the Gods will ease your
weary body with accelerated healing.
~
A
83 5
A
82 3

```

OEDIT

To start to edit your area you enter `oedit` which will begin editing the zone you are in and brings up the following:

Usage: `oedit (<vnum> | create | done | save | allow | deny | delete | undelete | default <vnum>)`

To create a object:

- Use `oedit default <vnum>` to set your default object settings to copy the settings of an existing object.
- Use `oedit create <vnum>` to create a new object like your default.
- Use `oedit delete <vnum>` to delete an object after reboot.
- Use `oedit undelete <vnum>` to unmark an object for deletion before reboot.

When you are done creating and editing your objects:

- Use `oedit load <vnum>` or `oload <vnum>` to load your newly created object.
- Use `oedit save` or `osave` to save your work.
- Use `oedit done` to exit from the room editor.

OSET

To edit an object, you need to be in `oedit` and use any of the `oset` commands. Plain `oset` brings up the following:

Usage : `oset <field> <value> [field2...]`

Valid fields are:

<u>alias</u>	object alias list (ex: <code>oset alias short sword</code>)
<u>short</u>	short description (ex: <code>oset short a short sword</code>)
<u>long</u>	long description
<u>action</u>	action description
<u>edesc</u>	extra descriptions
<u>type</u>	object type
<u>extra</u>	extra effects bitvector
<u>wear</u>	wear bitvector
<u>v0</u>	value0)
<u>v1</u>	value1)
<u>v2</u>	value2)-- object type dependent
<u>v3</u>	value3)

```

v4      value4 )
v5      value5 )
weight  object weight
value   value of object in gold coins
rent    rent per day in gold
affect  affections
restrict restrictions
comp    composition
autospeed sets recommend weapon speed

```

oset will accept multiple fields, up to MAX_INPUT_LENGTH.
The fields name, short, long, action, and edesc can't be followed by additional fields.

For detailed field help, use: oset <field>

Example : oset weapon glow magic weight 5 v0 2

Every field has more information about its formats and flags if you do oset <command>.

OLOAD

Used to load an object you have in the editor into the mud.

OSAVE

Used when you are done editing objects in your zone and want to save them.

OLC COMMANDS FOR EACH FIELD

Name	oset alias <alias list>
Short Description	oset short <short description>
Long Description	oset long
Action Description	oset action <action description>
Extra Description	oset edesc <command> <keyword>
Object Type	oset <object type>
Wear Flag	oset <wear flag>
Extra Flag	oset <extra flag>
Composition Flag	oset <comp flag>
Anti Flag	oset <restrict flag>
Object Value 0	oset v0 <value>
Object Value 1	oset v1 <value>
Object Value 2	oset v2 <value>
Object Value 3	oset v3 <value>
Object Value 4	oset v4 <value>
Weight	oset weight <value>
Money Value	oset value <value>
Cost per Day	oset rent <value>
Size	oset size <value>
Affect	oset affect <affect> <value>

DESCRIPTIONS

Descriptions are done much the same way as those in the section in 'Rooms' and 'Mobs' earlier in this handbook. However, the placement of tildes is still very important.

ALIASES or NAME

This is the name or alias list of the mob, what words are used to interact with it. The tilde should be at the end of the list and nothing should be capitalized.

Manual

object first interact~

OLC

< > oset alias
Usage : oset alias <alias list>

<alias list> should be a list of names players can use to act on the object.

Example : oset alias sword short

SHORT DESCRIPTION

The short desc is seen when the object is the target of a command. The tilde needs to follow the description. The first word of the description should be 'a', 'an' or 'the' unless it's a name, the entire description should be lower case.

Manual

the first example object~

OLC

< > oset short
Usage : oset short <object short description>
Example : oset short a short sword

LONG DESC OR DESCRIPTION

The long description is the description of the object that the players see lying in a room. The description should be a full sentence with the correct punctuation and the tilde at the end of the sentence on the same line.

Manual

An example object sits here.~

OLC

< > oset long
Usage : oset long <object long description>
An object's long description is the text you see when it is lying on the ground. The first word should be capitalized, and it should end with a period.

Example : oset long A short sword is lying here.

ACTION DESCRIPTION

There used to be an action description, but it is no longer used. A ~ is still required in the file format though.

Manual

~

OLC

< > oset action

Usage : oset action <object action description>

An object's action description is the text you see when it is used.

The documentation on this is incomplete so no info on syntax is available.

EXTRA DESCRIPTION

An extra desc (of which there can be many, one, or none for each item), is something else specific to look at, not normally seen just by typing look, or seeing the item on the ground. An extra desc is started by an E (a separate E for each extra desc in the room), followed by the keywords that can be used to look at this description on the next line. Each keyword is separated by a space, followed by a tilde at the end of the line. Then, the description itself, followed by a tilde on its own line:

Manual

E

sword example~

It looks very shiny and polished, as if someone is taking care to try to make a good example.

~

OLC

< > oset edesc

Usage : oset edesc <command> <keyword list>

To add an extra description: oset edesc add <keyword list>, as in:

```
oset edesc add inscription hilt
```

To set the description text: oset edesc set <keyword>, as in:

```
oset edesc set hilt
```

This will bring up an editor for you to type in your edesc

Use no doublequotes and use only one keyword.

To delete an extra description: oset edesc delete <keyword>, as in:

```
oset del hilt
```

To show the description text: oset edesc show <keyword>, as in:

```
oset edesc show hilt
```

OBJECT TYPES

Manual

1	LIGHT	Light source.
2	SCROLL	Spells affect target.
3	WAND	Spells affect target.
4	STAFF or ROD	Spells affect all in room except holder.
5	WEAPON	Players do damage with these.
6	SPELL BOOK	Required for mages to cast spells. (Book)
7	MISSILE	Thrown object.
8	TREASURE	Rings, bracelets, necklaces, etc. (Treasure)
9	ARMOR	Plates, leathers, scales, etc.
10	POTION	Spells affect quaffer.
11	WORN	Regular clothing, cheap baubles.
12	OTHER	Typically, NO TAKE items used for atmosphere.
13	TRASH	Something useless used for atmosphere.
14	BOARD	A bulletin board. Check before creating one.
15	CONTAINER	Object which can contain other objects.
16	NOTE	Something to write on or is written on.
17	DRINK CON	Cups, mugs, barrels, fountains.
18	KEY	Any object type can also work as a key; vnum based.
19	FOOD	Yummy!
20	MONEY	Piles of coins.
21	PEN	Something to write with.
22	BOAT	Used to navigate water.
23	HOLY SYMBOL	<i>For clerical spells. This is an affect now and not an object type.</i>
24	CLIMBING	If in inventory, allows a player to enter MOUNTAIN.
25	SNOWSHOE	<i>Allows user to enter ARCTIC areas. Affect now and not an object type.</i>
26	MISSILE WEAPON	Object is used to shoot a missile.
27	MISSILE CON	Object holds a large number of missiles.
28	ITEM OF NATURE	<i>Object is used for druid spells. This is an affect not and not an object type.</i>
29	FIGURINE	Object is used to summon a specific mob.
30	PORTAL	Object may be entered.
31	MATERIAL	For raw and refined materials.
32	AUDIO	<i>Not yet implemented.</i>
33	NEW WEAPON	<i>Object is a weapon w/ damage based on wielder level. Not implemented.</i>
34	LEVER	Levers, switches, etc.
35	TELEPORT OBJ	Object that starts teleports.
36	VEHICLE	<i>Only partially implemented.</i>
37	CONTROL	Like levers but moves mobs around.
38	TRAP	Obj is a type of trap.
39	CLAN ALTAR	<i>Not yet implemented.</i>
40	SHIP	<i>Not yet implemented.</i>
41	SHARD	Shard of Legends. DO NOT SET OR USE. EVER.
42	SMOKE	Spell affects smoker.
43	PILL	Spell affects eater.
44	SNORT	Spell affects snorter.
45	SALVE	Spell affects target.
46	INJECTION	Spell affects target.
47	STAFF	Two handed weapon that works as a spellbook.
48	MONK GLOVES	Gloves for monks that are used as weapons.
49	INSTRUMENT	Musical instrument, for use with BARDS.
50	MATERIAL SMELTER	Used to covert materials into refined materials for proficiencies.
51	MATERIAL FORGE	Used to convert refined materials into items for proficiencies.
52	FISHING POLE	Used to catch fish.

53	HARNESSING GEM	Used for harvesting magic materials. Needs to be held to harvest.
54	BANDAGE	Used to bind wounds in healing.
55	NATURE	Transport via plant spells.

OLC

< > oset type
Usage : oset <object type>

Valid object types are:

```

light          note
scroll         drinkcon
wand           key
rod            food
smoke          pill
snort          salve
injection      castweapon
weapon         money
treasure       pen
armor          boat
potion
worn           book
other          missile
trash          board
staff          holysymbol (NIU - use apply_holysymbol)
snowshoe       mweapon
mcontainer     itemofnature (NIU - use apply_naturesymbol)
figurine       portal
material        audio
altar          trap
container      weaponn
vehicle        shard
instrument     monkgloves
materialsmelter materialforge
fishingpole    harnessinggem
lever          teleport

climbing       bandage

nature (for transport via plant spell))

```

Example : oset weapon
 oset potion

WEAR FLAGS

These flags are handled the same as the flags mentioned in section III of this Handbook. The chart is self-explanatory.

Manual

1	a	TAKE	Obj can be picked up	65536	q	EAR	One ear
2	b	FINGER	Rings	131072	r	BACK	Misc
4	c	NECK	Necklaces	262144	s	FULL BODY	Do not use.
8	d	BODY	Platemail, jackets	524288	t	SHIRT	Do not use.
16	e	HEAD	Helmets, caps	1048576	u	EYES	Glasses, lens

32	f	LEGS	Left & right	2097152	v	SURROUNDING	Magical
64	g	FEET	Left & right	4194304	w	ORBITING	Misc
128	h	HANDS	Left & right	8388608	x	FLOATING	Misc
256	i	ARMS	Left & right	16777216	y	FOOT	One foot
512	j	SHIELD	Shields	33554432	z	HAND	One hand
1024	k	ABOUT BODY	Robes, cloaks	67108864	A	ARM	One arm
2048	l	WAIST	Belts	134217728	B	LEG	One leg
4096	m	WRIST	Bracelets	268435456	C	BADGE	A.k.a tattoo
8192	n	WIELD	Weapons	536870912	D	ANKLET	Left & right
16384	o	HOLD	Miscellaneous	1073741824	E	MOUNT	Items for mounts.
32768	p	FACE	Masks				

OLC

```
< > oset wear
Usage   : oset <wear flag>
```

This will toggle the flag you specify.

Valid wear flags are:

```
take           arms
finger         shield
neck           about
body           waist
head           wrist
legs           wield
feet           hold
face           ear
hands          back
eyes           orbit
surround       float
onefoot        onearm
onehand        oneleg
mount (to allow mounts to wear the item)
badge          anklet
```

```
Example : oset take
          oset wield
```

EXTRA FLAGS

Manual

1	a	GLOW	Item glows.
2	b	HUM	Item hums.
4	c	NO DONATE	Item may not be donated.
8	d	NO RENT	Item may not be rented.
16	e	DARK	Must have sense object to see/use object.
32	f	INVISIBLE	Item is invisible.
64	g	MAGIC	Item is magical and cannot be enchanted.
128	h	NO DROP	Item cannot be dropped.
256	i	BLESS	Item is blessed.
512	j	DONATED	Item is donated; cannot be sold to a shop.
1024	k	GOD ONLY	Item is unusable by mortals.
2048	l	QUEST	Item is a quest item.
4096	m	DAMAGED	Item is damaged.
8192	n	BRITTLE	Item more likely to be damaged.

16384	o	DURABLE	Item less likely to be damaged.
32768	p	PLURAL	First keyword is plural. (For game messages.)
65536	q	TWO-HANDED	Can only be wielded using two hands.
131072	r	OFF-HAND	Can only be used by the off hand.
262144	s	BUCKLER	Can be used with two weapons.
524288	t	IS NO HOLD	Weapons that cannot be holdable (offhand) weapons
1048576	u	NO REPAIR	Item can't be repaired.
2097152	v	LOWER	<i>Minimum level reduced for this item. Do not use.</i>
4194304	w	RESIZED	The item cannot be resized.
8388608	x	PERISHABLE	Items will decay if on ground > 5 ticks.
16777216	y	NO LOCATE	'locate object' spell will not find this object.
33554432	z	BURIED	Item must be dug up with a shovel.
67108864	A	LEGACY	Stats won't reset at login
134217728	B	RANDOM	<i>Randomly generate items. Do not use.</i>
268435456	C	NOMOBLOOT	Item is not lootable by mobs.
536870912	D	INSURED	<i>Item is hot, can't be sold, dropped, etc. Used by Opoint shop. Do not use.</i>
1073741824	E	OWNED	<i>Picking this up will set thief. Used by Opoint shop. Do not use.</i>
2147483648	F	NOENHANCE	Item can't be enhanced with qpoints

OLC

```
< > oset extra
Usage   : oset <extra flag>
```

This will toggle the flag you specify.
Valid extra flags are:

```
glow           bless
hum            donated
noRent        godonly
noDonate      quest
dark          damaged
invisible     brittle
magic         durable
resized       perishable
noLocate      buckler
noDrop        plural
buried        legacy
nomoblood     noenhance
onetimekey    noRepair
offhand
twohanded     noHold
```

```
Example : oset glow
         oset magic
```

COMP FLAGS

Manual

1	a	ORGANIC	Sticks, leaves, feathers, food, etc.(Soft) (Magic)
2	b	CHAIN METAL	Chain mail armor, skirt, etc. (Hard)
4	c	MINERAL	Rocks, dirt (Hard) (Treasure)
8	d	WOOD	Trees and stuff (Hard)
16	e	PAPER	Mail, parchment, scrolls
32	f	CLOTH	Regular clothing, cloaks (Soft)

64	g	LEATHER	Includes hides (Soft)
128	h	MAGICAL	Pure energy, i.e. magical spheres (Magic)
256	i	FLUID	Drinks, potions (Magic)
512	j	BONE	Includes teeth, shells, and chitinous matter (Hard)
1024	k	GEM	Crystal, glass (Treasure)
2048	l	PRECIOUS METAL	Gold, silver, platinum (Hard) (Treasure)
4096	m	OTHER METAL	Steel, iron, bronze (Hard)
8192	n	PYRITE	Fool's gold.
16384	o	GLASS	Clear stuff, breakable. (Treasure)
32768	p	MITHRIL	Looks like silver but very strong. (Hard)
65536	q	ADAMANTIUM	Really hard metal. (Hard)
131072	r	DIAMOND	Hard clear stone. (Treasure)
262144	s	ORICHALCUM	Metal from Atlantis. (Hard)
524288	t	WAX	Candles, etc. (Magic)
1048576	u	SILVER	Werewolves are vulnerable to silver

OLC

< > oset comp

Usage : oset <comp flag>

This will toggle the flag you specify.

Valid comp flags are:

organic	chainmetal
mineral	wood
paper	cloth
leather	magical
fluid	bone
gem	preciousm
glass	mithril
orichalcum	wax
adamantium	diamond
miscmetal	pyrite

Example : oset organic
 oset gem

ANTI FLAGS

The anti flags mean that the class, group, or alignment cannot use it. (Except can-gore, which flags headwear so that a minotaur can wear it and still use his gore skill.)

Manual

1	a	ANTI GOOD	65536	q	<i>ANTI WIZARD. Do not use.</i>
2	b	ANTI EVIL	131072	r	ANTI TEMPLAR
4	c	ANTI NEUTRAL	262144	s	ANTI ASSASSIN
8	d	ANTI FIGHTER	524288	t	ANTI MALE
16	e	ANTI MAGE	1048576	u	ANTI FEMALE
32	f	ANTI PRIEST	2097152	v	IS SPECIAL
64	g	ANTI ROGUE	4194304	w	<i>IS UNIQUE. Do not use.</i>
128	h	UNLOWERABLE	8388608	x	ANTI PALADIN
256	i	ANTI RANGER	1677216	y	ANTI NECROMANCER
512	j	ANTI PROPHET	33554432	z	CAN GORE
1024	k	ANTI SAMURAI	67108864	A	<i>LEVEL LOCKED. Do not use.</i>

2048	I	ANTI DEMONIAC	134217728	B	<i>ANTI NONREMORT. Do not use.</i>
4096	m	ANTI BARD	268435456	C	ANTI DREADLORD
8192	n	ANTI BARBARIAN	536870912	D	<i>ANTI SORCERER. Do not use.</i>
1638	o	ANTI DRUID	1073741824	E	ANTI MONASTIC
3276	p	ANTI MONK			

OLC

```
< > oset restrict
Usage   : oset <restrict flag>
```

This will toggle the flag you specify.

Valid restrict flags are:

```
antigood          antievil
antimale          antifemale
antineutral       antibarbarian
antimage          antitemplar
antiassassin      antimonk
cangore           antipaladin
antidreadlord     special (reduces default min level)
antidruid         antiranger
antinecromancer   antiprophet

antisamurai       antidemoniac

nolower           antibard

antifighter/mage/rogue/priest/monastic
```

Example : oset antigood

MINIMUM LEVEL

The minimum level required to use the object.

OLC

You are not going to directly set the minimum level of an object using OLC. The level of the object depends on the other settings on the object and is determined for each class separately. Generally speaking, adding +mana will increase the level requirement for non-spell casters, adding +damage will increase the level requirements for spell casters, making something durable will increase the level, making brittle will decrease it, adding AC will increase rank requirements, etc. If you are looking for an object to be for a certain level of player, you are going to have to look at different objects around the mud to see their settings and what levels they are available for.

OBJECT VALUES

The six numbers consisting of the 'item values' are different for each type of item. Below, the meanings of these numbers are broken down by each type. Zeroes refer to fields not used, while letters are explained for each section.

LIGHT (1)

Value[0] : Color – Not used

Value[1] : Type – Not used

Value[2] : Hours – Number of hours of light. 0 hours means light has gone out. -1 creates an eternal light source.

Value[3] : Not Used

Value[4] : Not Used
 Value[5] : Not Used

SCROLL (2)

Value[0] : Level of the spell on the scroll
 Value[1] : Which spell (see 'Spell ID's below for more information on this)
 Value[2] : Which spell (unused spells should be set to -1)
 Value[3] : Which spell
 Value[4] : Not Used
 Value[5] : Not Used

WAND (3)

Value[0] : Level of spell in wand
 Value[1] : Maximum number of charges
 Value[2] : Charges left
 Value[3] : Which spell in wand (see 'Spell ID's below for more information)
 Value[4] : Time to Recharge (requires approval).
 Value[5] : Not Used

ROD (4)

Value[0] : Level of spell in rod
 Value[1] : Max charges
 Value[2] : Charges left
 Value[3] : Which spell in rod (see 'Spell ID's below for more information)
 Value[4] : Time to Recharge (requires approval).
 Value[5] : Not Used

WEAPON (5)

Value[0] : Speed bonus. (Negative numbers are slower.)
 Value[1] : Number of dice to roll for damage.
 Value[2] : Size of dice to roll for damage.
 Value[3] : The weapon type, one of:

NUMBER	CATEGORY	GENERAL NOTES
200	HIT	Generic message (default)
201	POUND	Hammers and clubs
202	PIERCE	Back stabbers
203	SLASH	Regular swords
204	CRUSH	Maces and flails
205	WHIP	Chance for entanglement
206	POLEARM	Halberds and pikes
207	TORCH	Fire damage, light source
208	HACK	Axes and scythes, jungle terrain
209	LANCE	Extra damage while mounted
210	CLAWS	
211	BITE	
212	STING	
213	CONSTRUCT	
214	HOOF	
215	TENTACLE	
216	HORNS	
217	BLOOD	
218	SHOCK	Electrical damage.
219	FLAMING	Fire damage
220	SILVER SLASHING	
221	SILVER POUND	

222	SILVER PIERCE	
-----	---------------	--

Value[4] : Special weapon type (called weapon procedure or 'wproc'), one of:

#	Type	Damage/Effect
0	NONE	NONE
1	FIREBALL	<power>d8
2	HEAL	Casts the spell 'heal' at level <power>.
3	POISON	Casts the spell 'poison' at level <power>.
4	SUNRAY	<power>d10+ <power>
5	TURN UNDEAD	Casts the spell 'turn undead' at level <power>.
6	FIRESTORM	<power>d6 + <power>
7	BERSERK	<power> % chance of berserking.
8	SMITE	<power>d15
9	HOLY AVENGER	<power>d10, plus extra attacks.
10	BASHER	Requires approval.
11	LIFE DRAIN	Drains 1d <power> + <power> hp
12	DISPELL	<power> % to remove affects (dispel). Requires approval.
13	BLIND/GOUGE	1d25+<power>, plus blind effect.
14	ENVENOM	NONE
15	MANA DRAIN	Drains 1d <power> + <power> hp
16	VORPAL	See below.
17	HELLSTREAM	<power>d15
18	CHILL TOUCH	<power>d3
19	GROUP HEALER	3d<power> hp to each group member.
20	FIRESHIELD	1d<power>, plus may cast 'fireshield.' Requires approval.
21	LIGHTNING	<power>d6
22	SUFFOCATE	<power>d15
23	ICESTORM	<power>d4 + <power>
24	AGONY	<power> % to occur, reduces dex and ac. (Resets at tick).
25	NECRO KING SWORD	Special; do not use.
26	KNOCKDOWN	<power>d4, + bash effect
27	BLOODLETTER	1d<victim level> bleeding dam/pulse. (resets at tick).
28	BONEBREAKER	<power>d6, plus bash and scare effects.
29	SAMURAI FURY	On katana: 1-15 (chance to hit with katana), 16-30 (chance to hit with wakizashi) On wakizashi: 1-7 (chance to hit with katana), 8-14 (chance to hit with wakizashi) For noble level equipment only.
30	GODHAMMER	<i>Like the spell. Do not set.</i>
31	STRANGULATION	
32	CHROMATIC ORB	
33	STAMINA DRAIN	
34	LIGHTNING BOW	
35	FIRE BOW	
36	ICE BOW	
37	MANA DRAIN BOW	
38	STAMINA DRAIN BOW	
39	BASH BOW	

Value[5] :: is the <power> level of the special weapon. (If Value[4] is 0, set to this to 0 as well.) Generally, a value of 10 is as high as this should go, and the weapon should be extremely rare if it is any higher.

- If Value[4] is 16 (vorpal), Value[5] determines the range of possible body parts to be severed. The numbers are inclusive. Thus, if Value[5] is 0, only the head could be severed. If this is set to 3, then the head, waist, hand, or arm could be severed. Do not set this any higher than 4.

#	LOCATION	#	LOCATION	#	LOCATION
0	None	3	Arm	6	Waist (instant death)
1	Hand	4	Leg	7	Heart (instant death)
2	Foot	5	Head (instant death)		

Note: When designing a weapon with a wproc, keep in mind that its power can be increased at the Quest Point shop. The only exception to this is the vorpal wproc and samurai fury wproc as they work on different mechanisms.

SPELL BOOK (6)

Value[0] : Maximum spell level that can be cast from the book.

Value[1] : Additional individual spell.

Value[2] : Additional individual spell.

Value[3] : Additional individual spell.

Value[4] : Not Used

Value[5] : Not Used

MISSILE (7)

Value[0] : Strength required to throw

Value[1] : Number of damage dices

Value[2] : Number of sides per damage dice

Value[3] : The missile type. Type is one of:

NUMBER	CATEGORY	GENERAL NOTES
200	HIT	Default (generic message)
230	DART	Will end up in victim's inventory.
231	ROCK	Will end up shattered.
232	BOULDER	Will end up on ground.
233	SPEAR	Must be shot from MISSILE WEAPON.
234	ARROW	Must be shot from MISSILE WEAPON.
235	BOLT	Must be shot from MISSILE WEAPON.
236	KNIFE	Will end up in victim's inventory.
237	ACID	
238	HOLY WATER	
239	FLAME OIL	

Value[4] : Missile range.

Value[5] : Not Used

TREASURE (8)

[All values are 0. A treasure item is one with a high <value> field.]

ARMOR (9)

Value[0] : The effective AC. A positive value is a bonus, a negative is a penalty.

Value[1] : The maximum AC for when the armor is completely undamaged.

Value[2] : Not Used

Value[3] : Special type of armor, one of:

1	SPIKED	Can do Value[4] d Value[5] damage to opponent.
2	DAMAGE REDUCER	Reduces damage by Value[4] d Value[5].
3	MANA DRAIN	Drains Value[4] d Value[5].
4	BURN EVIL	Can do Value[4] d Value[5] damage to evil opponent.
5	STAB DAMAGE	Can do Value[4] d Value[5] stabbing damage to opponent.
6	FLAME DAMAGE	Can do Value[4] d Value[5] flame damage to opponent.
7	FROZEN DAMAGE	Can do Value[4] d Value[5] ice damage to opponent.
8	SHOCK DAMAGE	Can do Value[4] d Value[5] shock damage to opponent.

Value[4] : Set to 0, unless used by special armor type above.

Value[5] : Set to 0, unless used by special armor type above. If the item is a badge the clan number is located here.

POTION (10)

Value[0] : Level of the spell in the potion.

Value[1] : Which spell (see 'Spell ID's below for more information)

Value[2] : Which spell (unused values should be set to -1)

Value[3] : Which spell

Value[4] : Not Used

Value[5] : How much thirst (See item #17, drink containers, column T) the potion will fill. Valid range is 1-24 and will default to 3 in the game if left at 0.

WORN (11)

Value[0] : Not Used

Value[1] : Not Used

Value[2] : Not Used

Value[3] : Special type of worn gear, one of:

1	SPIKED	Can do Value[4] d Value[5] damage to opponent.
2	DAMAGE REDUCER	Reduces damage by Value[4] d Value[5].
3	MANA DRAIN	Drains (0 to Value[4]) + damage/10 points of mana.
4	BURN EVIL	Can do Value[4] d Value[5] damage to evil opponent.
5	STAB DAMAGE	Can do Value[4] d Value[5] stabbing damage to opponent.
6	FLAME DAMAGE	Can do Value[4] d Value[5] flame damage to opponent.
7	FROZEN DAMAGE	Can do Value[4] d Value[5] ice damage to opponent.
8	SHOCK DAMAGE	Can do Value[4] d Value[5] shock damage to opponent.

Value[4] : Set to 0, unless used by special armor type above.

Value[5] : Set to 0, unless used by special armor type above.

OTHER (12)

[All values should be set to 0.]

TRASH (13)

[All values should be set to 0.]

BOARD (14)

Value[0] : Minimum level to read board.

Value[1] : Minimum level to write on board.

Value[2] : Minimum level to remove messages from board.

Value[3] : Not used

Value[4] : 1 for clan board or 2 class board

Value[5] : If value[4] is a 1 then this is the minimum clan rank required to remove items from the board. If value[4] is 2 then it's the superclass group number below.

1	MAGE
2	PRIEST
3	ROGUE
4	FIGHTER
5	MONK

Note: the action field must contain the name of the file that contains the messages. <boards/Board.name~>. Please consult with the admin before creating a bulletin board.

CONTAINER (15)

Value[0] : Maximum weight the container can contain.

Value[1] : Container flags:

CLOSEABLE	1	must be set if item has a workable lid
WIZLOCK	2	cannot be unlocked except by key or god
CLOSED	4	if set, item will load closed, otherwise open
LOCKED	8	if set, item will load locked, otherwise unlocked
BARGEPROOF	16	cannot be barged open by warrior
KNOCKPROOF	32	cannot be knocked open by spell caster
PICKPROOF	64	cannot be picked open by thief

Value[2] : The key vnum of the container. No lock = -1.

Value[3] : Internal use for Corpses that must rot.

Value[4] : Not Used

Value[5] : Not Used

NOTE (16)

Value[0] : Tongue - Not Used

[All other values should be set to 0.]

DRINK CON (17)

Value[0] : Maximum drink-units the drink-container can contain.

Value[1] : Number of drink-units that are left in the container.

Value[2] : The type of liquid in the drink-container (D = Drunk, F = Full, T = Thirst, and W = Wired), one of the below or -1 for random.

TYPE	#	D	F	T	W	TYPE	#	D	F	T	W
WATER	0	0	1	10	0	MACADEMIA NUT LIQUEUR	85	2	0	2	0
BEER	1	1	1	5	0	PRALINE LIQUEUR	86	2	0	2	0
WINE	2	2	0	5	0	WALNUT LIQUEUR	87	2	0	2	0
ALE	3	2	1	5	0	AKUAVIT	88	2	0	2	0
DARK ALE	4	1	1	6	0	COFFEE LIQUEUR	89	2	0	2	0
WHISKEY	5	5	0	4	0	IRISH CREME	90	2	0	2	0
LEMONADE	6	0	1	8	0	CAPPUCINO LIQUEUR	91	2	0	2	0
FIREBREATHER	7	8	0	0	0	GALLIANO	92	2	0	2	0
LOCAL SPECIALITY	8	3	2	3	0	OZUO	93	2	0	2	0
SLIME MOLD JUICE	9	0	4	6	0	SAMBUCA	94	2	0	2	0
MILK	10	0	3	6	0	TUACA	95	2	0	2	0
TEA	11	0	1	6	3	ALCOHOL	96	4	0	3	0
COFFEE	12	0	1	5	6	BOURBON	97	4	0	3	0
BLOOD	13	0	2	4	0	BRANDY	98	4	0	3	0
SALTWATER	14	0	1	0	0	CHAMPAGNE	99	4	0	3	0
TEQUILA	15	4	0	3	0	CITRON VODKA	100	4	0	3	0
GROG	16	3	1	5	0	GIN	101	4	0	3	0
SOYMILK	17	0	3	5	0	IRISH WHISKEY	102	4	0	3	0
EGG NOG	18	1	2	4	0	SAKE	103	6	0	3	0
HOT CHOCOLATE	19	0	2	5	4	SCOTCH	104	4	0	3	0
RUM	20	4	1	2	0	SPICED RUM	105	4	0	3	0
URINE	21	0	0	1	0	VODKA	106	4	0	3	0
BUTTERMILK	22	0	0	3	0	WHISKEY	107	5	0	3	0
SODA	23	0	0	3	4	ALABAMA SLAMMER	108	3	0	4	0
DIET SODA	24	0	0	3	4	AMARETTO SOUR	109	3	0	4	0

APPLE JUICE	25	0	0	4	0	APPLE PIE	110	3	0	4	0
CARROT JUICE	26	0	1	4	0	BLACK RUSSIAN	111	3	0	4	0
CRANBERRY JUICE	27	0	0	4	0	BLOODY MARY	112	3	0	4	0
FRUIT JUICE	28	0	0	4	0	DAQUIRI	113	3	0	4	0
GRAPEFRUIT JUICE	29	0	1	4	0	FUZZY NAVEL	114	3	0	4	0
GRAPE JUICE	30	0	0	4	0	GIN FIZZ	115	3	0	4	0
JUICE	31	0	1	4	0	GIN TONIC	116	3	0	4	0
ORANGE JUICE	32	0	1	4	0	HAIRY NAVEL	117	3	0	4	0
PINEAPPLE JUICE	33	0	1	4	0	KAMIKAZE	118	5	0	4	0
TOMATO JUICE	34	0	1	4	0	LONG ISLAND ICED TEA	119	8	0	4	2
TROPICAL JUICE	35	0	1	4	0	MAI TAI	120	8	0	4	0
CAPPUCINO	36	0	0	2	8	MALIBOU SUNRISE	121	4	0	4	0
CAFE MOCHA	37	0	0	2	7	MANHATTAN	122	3	0	4	0
HOT CHOCOLATE	38	0	0	2	3	MARGARITA	123	4	0	4	0
APPLE BRANDY	39	4	0	2	0	MARTINI	124	4	0	4	0
APPLE SCHNAPPS	40	2	0	2	0	MIMOSA	125	3	0	4	0
APPLE CINNAMON	41	2	0	2	0	MINT JULEP	126	3	0	4	0
APRICOT BRANDY	42	4	0	2	0	PASSIONATE SCREW	127	4	0	4	0
BANANA LIQUEUR	43	2	0	2	0	PINA COLADA	128	3	0	4	0
BLACK RASPBERRY LIQUEUR	44	2	0	2	0	RUM AND COKE	129	3	0	4	3
BLACKBERRY BRANDY	45	4	0	2	0	RUM RUMMER	130	3	0	4	0
BLACKBERRY SCHNAPPS	46	2	0	2	0	RUSTY NAIL	131	3	0	4	0
CHERRY BRANDY	47	4	0	2	0	SCREAMING ORGASM	132	3	0	4	0
COCONUT RUM	48	4	0	2	0	SCREWDRIVER	133	3	0	4	0
LEMON LIQUEUR	49	2	0	2	0	SEX ON THE BEACH	134	6	0	4	0
MELON LIQUEUR	50	2	0	2	0	SEVEN AND SEVEN	135	3	0	4	0
ORANGE LIQUEUR	51	2	0	2	0	TEQUILA SUNRISE	136	6	0	4	0
PASSION FRUIT LIQUEUR	52	2	0	2	0	TOM COLLINS	137	3	0	4	0
PEACH SCHNAPPS	53	2	0	2	0	VODKA MARTINI	138	10	0	0	4
PEAR BRANDY	54	4	0	2	0	ZOMBIE	139	8	0	4	0
PLUM BRANDY	55	4	0	2	0	MANGO LASSI	140	0	1	4	0
RASPBERRY LIQUEUR	56	2	0	2	0	ALMOND MILK	141	0	2	4	0
STRAWBERRY LIQUEUR	57	2	0	2	0	SUNFLOWER MILK	142	0	2	4	0
WATERMELON LIQUEUR	58	2	0	2	0	RICE MILK	143	0	1	4	0
ANISE	59	2	0	2	0	HAZELNUT MILK	144	0	2	4	0
BUTTERSCOTCH SCHNAPPS	60	2	0	2	0	CASHEW MILK	145	0	2	4	0
CHOCOLATE LIQUEUR	61	2	0	2	2	CHOCOLATE MILK	146	0	1	4	2

CREME DE COCOA	62	2	0	2	2	GOAT MILK	147	0	2	4	0
CHOCOLATE MINT LIQUEUR	63	2	0	2	2	PUSS	148	0	0	1	0
TOFFEE LIQUEUR	64	2	0	2	0	SNOT	149	0	1	1	0
WHITE CHOCOLATE LIQUEUR	65	2	0	2	0	SALIVA	150	0	0	1	0
HERBS	66	2	0	2	0	DIARRHEA	151	0	1	1	0
ABSINTHE	67	2	0	2	0	VOMIT	152	0	1	1	0
CINNAMON LIQUEUR	68	2	0	2	0	HOG VOMIT	153	0	1	1	0
BENEDICTINE	69	2	0	2	0	CHICKEN PUKE	154	0	1	1	0
BITTERS	70	2	0	2	0	CANCEROUS OOZE	155	0	0	1	0
GINGER LIQUEUR	71	2	0	2	0	TOXIC SLUDGE	156	2	1	1	0
HONEY LIQUEUR	72	2	0	2	0	SEWAGE	157	0	1	1	0
LICORICE	73	2	0	2	0	ROTTEN WORM JUICE	158	0	0	1	0
MINT JULEP	74	2	0	2	0	YERBA MATE	159	0	0	4	3
MULLED CIDER	75	0	0	3	0	THAI YOUNG COCONUT JUICE	160	0	0	5	0
MULLED WINE	76	2	0	3	0	PEPPERMINT TEA	161	0	0	4	0
PEPPERMINT SCHNAPPS	77	2	0	2	0	CHAMOMILE TEA	162	0	0	4	0
ROSE WATER	78	2	0	2	0	MINT TEA	163	0	0	4	1
VANILLA LIQUEUR	79	2	0	2	0	GREEN TEA	164	0	0	4	3
WORMWOOD	80	2	0	2	0	OOLONG TEA	165	0	0	3	6
ALMOND LIQUEUR	81	2	0	2	0	BLACK TEA	166	0	0	3	5
CREME DE CASSIS	82	2	0	2	0	RED TEA	167	0	0	4	1
HAZELNUT LIQUEUR	83	2	0	2	0	VINEGAR	168	0	0	1	0
KUMMEL	84	2	0	2	0	ELEPHANT SEMEN	169	0	1	1	0

The above values for drunkenness/fullness/thirst are used per four "units" drunk. The values are expressed in HOURS!

Example:

Coyote empties a bottle (say 7 units) of whisky. (Coyote is now mudding drunk.)

His Drunkenness increases by $((7/4)*6)$ hours.

His Fullness increases by $((7/4)*1)$ hours.

His Thirst increases by $((7/4)*4)$ hours.

The hours above are numbers between 0 and 24. 24 hours is the maximum for drunkenness/fullness/thirst.

Value[3] : if this value is non-zero, the drink is poisoned.

Value[4] : Not Used

Value[5] : Not Used

KEY (18)

Value[0] : Type - Not Used

Value[1] : Uses - Amount of uses on the key. Zero uses is unlimited, otherwise number specified is limit.

Value[2] : Key Required. - Not used.

Value[3] : Key Required. - Not used.

Value[4] : Not Used

Value[5] : Not Used

FOOD (19)

Value[0] : The number of hours that this food will fill the stomach

Value[1] : Which spell on the food item (see 'Spell ID's below for more information), otherwise 0
 Value[2] : Level of the spell, otherwise 0 – must be set
 Value[3] : If this value is non-zero, the food is poisoned.
 Value[4] : Not Used
 Value[5] : Not Used

MONEY (20)

Value[0]: The number of gold coins "in the pile of coins". [All other values should be set to 0.]

PEN (21)

[All values should be set to 0.]

BOAT (22)

[All values should be set to 0.]

HOLY SYMBOL (23)

[All values should be set to 0.]

CLIMBING (24)

[All values should be set to 0.]

SNOWSHOES (25)

[For object types 21 – 25, All values should be set to 0.]

MISSILE WEAPON (26)

Value[0] : Weapon speed
 Value[1] : Not used.
 Value[2] : Not used.
 Value[3] : Missile type it shoots.

233	SPEAR
234	ARROW
235	BOLT

Value[4] : Special ability.

34	LIGHTNING BOW
35	FIRE BOW
36	ICE BOW
37	MANA DRAIN BOW
38	STAMINA DRAIN BOW
39	BASH BOW

Value[5] : Power level of the special ability.

MISSILE CONTAINER (27)

Value[0] : Number of missiles in the container. (Use -1 for infinite)
 Value[1] : Number of dice to roll for damage.
 Value[2] : Size of dice to roll for damage.
 Value[3] : Type of missile contained within.

233	SPEAR
234	ARROW
235	BOLT

Value[4] : Range

Value[5] : Max missiles(Use -1 for infinite)

ITEM OF NATURE (28)

[All values should be set to 0.]

FIGURINE (29)

Value[0] : Vnum of mob within the figurine.
Value[1] : Number of charges.
Value[2] : Number of charges left.
Value[3] : Max number of mobs that may be in game at once.
Value[4] : Not Used.
Value[5] : Not Used.

PORTAL (30)

Value[0] : Vnum of destination room.
Value[1] : Minimum player level required to enter the portal.
Value[2] : Maximum player level allowed to enter the portal.
Value[3] : Not Used.
Value[4] : Not Used.
Value[5] : Not Used.

MATERIAL (31)

Value[0] to [5] are automatically generated.
Value[0] : the material type:

0	Poison	11	Paper
1	Wild Herbs	12	Raw Herbs NIU
2	Food	13	Raw Food
3	Metal	14	Metal Ore
4	Gemstone	15	Gem Ore
5	Milled Wood	16	Timber
6	Magic Energy	17	Unstable Magic
7	Leather	18	Hides
8	Fabric	19	Raw Fiber
9	Stone	20	Boulders
10	Refined Bone	21	Bones

Value[1] : is the quality

1	Junk	8	Superior
2	Rough	9	Pristine
4	Average	10	Exquisite
6	Good	11	Flawless
7	Excellent	12	Divine

AUDIO (32)

Value[0] : how often an action description to the room. If carried, sends the message to the owner's room. Larger numbers are slower.
Value[1] : Not used.
Value[2] : Not used.
Value[3] : Not used.
Value[4] : Not used.
Value[5] : Not used.

NEW WEAPON (33) *Do not use.*

Value[0] : Weapon Type (see WEAPON (5)) [All other values should be set to 0.]

LEVER (34)

Value[0] : Triggering action - Lever objects can vary from knobs to string to switches.

0	PULL	1	PUSH	2	TURN
---	------	---	------	---	------

Value[1] : Target Room - the vnum of the room this object will affect.

Value[2] : Action - What it will do specifically?

0	open door	4	lock door
1	close door	5	lock & close door
2	unlock door	6	toggle open/close
3	unlock & open door	7	toggle locked/unlocked

Value[3] : Argument

0-5	target exit number. (See EXITS in Section VI – WORLD FILE)
6	All exits affected (if applicable)

Value[4] : Not Used

Value[5] : Not Used

TELEPORT OBJECT (35)

Value[0] : Trigger

0	PULL	1	PUSH	2	TURN
---	------	---	------	---	------

Value[1] : Action

0	teleport player	11	teleport first mob with <vnum> in room
1	teleport group members in room	12	teleport last mob with <vnum> in room
2	teleport all PCs in room	13	Teleport all mobs with <vnum> in room
3	teleport all mobs in room	14	teleport all mobs/PCs/objs in room
4	teleport all mobs/PCs in room	15	teleport all objs in room
5	teleport first PC in room	16	teleport first obj in room
6	teleport first mob in room	17	teleport last obj in room
7	teleport first mob or PC in room	18	teleport first obj with <vnum> in room
8	teleport last PC in room	19	teleport last obj with <vnum> in room
9	teleport last mob in room	20	teleport all objs with <vnum> in room
10	teleport last mob or PC in room		

Value[2] : Source Room - Where the chars/objs come from. -1: the room containing the teleport.

Value[3] : Target Room - Where the chars/objs are teleported. -1: the room the teleport is in.

Value[4] : <vnum> - Virtual number of mob/object to be teleported

Value[5] : Not Used

VEHICLE (36) *Do not use.*

[All values should be set to 0.]

CONTROL (37)

[All values should be set to 0.]

TRAP (38)

Value[0] : Trap type

0	NONE	3	SNARE	6	GAS	9	SPIKE PIT
1	ALARM	4	POISON DART	7	SNAKES	10	CAVE-IN
2	CALTROPS	5	NET	8	ACID		

Value[1-5] : Unused

CLAN ALTAR (39) *Doesn't do anything.*

[All values should be set to 0.]

SHIP (40) *Not fully implemented.*

[All values should be set to 0.]

SHARD (41) *Do not use!!!!*

Randomly generated shards of the legends.

SMOKE (42)

Value[0] : Level of the spell.

Value[1] : Which spell (see 'Spell ID's below for more information)

Value[2] : Which spell (unused values should be set to -1)

Value[3] : Which spell

Value[4] : Not Used

Value[5] : How much thirst (See item #17, drink containers, column T) the smoke will fill. Valid range is 1-24 and will default to 3 in the game if left at 0.

PILL (43) *Do not use.*

[All values should be set to 0.]

SNORT (44) *Do not use.*

[All values should be set to 0.]

SALVE (45)

Value[0] : Level of the spell in the salve.

Value[1] : Which spell (see 'Spell ID's below for more information on this)

Value[2] : Which spell (unused values should be set to -1)

Value[3] : Which spell

Value[4] : Not Used

Value[5] : Not Used.

INJECTION (46) *Do not use.*

[All values should be set to 0.]

SPELL STAFF (47)

Value[0] : Speed bonus. (Negative numbers are slower)

Value[1] : Number of dice to roll for damage.

Value[2] : Size of dice to roll for damage.

Value[3] : Maximum spell level that can be cast from the book.

Value[4] : Special weapon type (called weapon procedure or 'wproc'). See the list under Value 4 for weapons. Note that some wprocs do not make sense when used on a staff, so choose wisely!

Value[5] :: is the <power>level of the special weapon. See the list under Value 5 for weapons.

Note: When designing a spell staff with a wproc, keep in mind that its power can be increased at the Quest Point shop. The only except to this is the vorpai wproc and samurai fury wproc as they work on different mechanisms.

MONK GLOVES (48)

Value[0] : Punch Bonus.

Value[1] : Not Used

Value[2] : Not Used

Value[3] : Special weapon type, one of:

#	Type	Damage/Effect
0	NONE	NONE
1	TALONS OF LIFE	Life drain
2	FISTS OF FLAME	Extra fire damage attack
3	FLURRY OF THE CURRENTS	Extra attacks
4	STONE PUNCH	Extra powerful attack
5	SKYSTRIKE PUNCH	Extra air attack
6	MAGIC	Extra magic attack

Value[4] : Frequency

Value[5] : Power Level

Note: For noble level equipment only.

INSTRUMENT (49)

Value[0] : Maximum song level that can be played by the instrument.

Value[1] : Not Used.

Value[2] : Not Used.

Value[3] : Not Used.

Value[4] : Special proc. 1 = fire horn, 2 = ice flute. 3 = lightning blast, and 4 = earth drum

Value[5] : Power level of the special procedure.

MATERIAL SMELTER (50)

Value[0] : Type of material that it works on. (should be raw items 5 and 12-21)

Value[1] : Quality of the finished product, 1-10 with a higher number being better.

Value[2] : Not Used.

Value[3] : Not Used.

Value[4] : Not Used.

Value[5] : Not Used.

0	Poison	11	Paper
1	Wild Herbs	12	<i>Raw Herbs (Do not use)</i>
2	Food	13	Raw Food
3	Metal	14	Metal Ore
4	Gemstone	15	Gem Ore
5	Wood	16	Timber
6	Magic Energy	17	Unstable Magic
7	Leather	18	Hides
8	Fabric	19	Yarn
9	Stone	20	Boulders
10	Refined Bone	21	Bones

MATERIAL FORGE (51)

Value[0] : Type of material that it works on. (see list above should be processed items 1-11)

Value[1] : Quality of the finished product, 1-10 with a higher number being better.

Value[2] : Not Used.

Value[3] : Not Used.

Value[4] : Not Used.

Value[5] : Not Used.

FISHING POLE (52)

[All values should be set to 0.]

HARNESING GEM (53)

[All values should be set to 0.]

BANDAGE (54)

[All values should be set to 0.]

NATURE (55)

[All values should be set to 0.]

OLC

< > oset v0
Usage : oset v0 <value>
v0-v5 are based on object type.

< > oset v1
Usage : oset v1 <value>
v0-v5 are based on object type.

< > oset v2
Usage : oset v2 <value>
v0-v5 are based on object type.

< > oset v3
Usage : oset v3 <value>
v0-v5 are based on object type.

< > oset v4
Usage : oset v4 <value>
v0-v5 are based on object type.

< > oset v5
Usage : oset v5 <value>
v0-v5 are based on object type.

WEIGHT

When determining the weight of a weapon, you must also consider at what strength a player will be able to wield it, if it can be held as a secondary weapon, either alone or via two handed wield, and how much it will add to the carrying capacity of the PC. The strength, dexterity, and rank requirements are auto-set based on the damage and speed of the item.

OLC

< > oset weight
Usage : oset weight <value>
Use this to set an object's weight in pounds.

VALUE

These values are currently left up to the author. Keep in mind however that relative value of an object should reflect the objects overall power, rarity, and difficulty to get. The value affects how much it will cost to repair the object as well as how much it can cost to increase the speed or lighten/make heavier the item.

OLC

< > oset value

Usage : oset value <value>

This sets an object's monetary value in gold coins.

COST PER DAY

This is typically set to be 10% of the VALUE. An object with a -1 in this position cannot be rented. An object with a 0 set for this value will not save in rent. This is useful for items such as perishable foods.

OLC

< > oset rent

Usage : oset rent <value>

This sets an objects cost per day when rented.

SIZE

The size of the object determines what races can use/wield/wear the item, or the size of the race that you intend to use it. Example: a scepter of lordly rule is probably considered a tiny object in relation to the size of a human, but it is meant for human use so it qualifies as size 10.

Manual

0	NONE (use sparingly, if at all)	13	LARGE
1	MICROSCOPIC	14	GREAT (troll)
2	MINISCULE	15	MASSIVE (ogre)
3	MINIATURE	16	HULKING
4	LILLIPUTIAN	17	HUGE
5	TINY (pixie)	18	GIANT
6	WEE (kender)	19	IMMENSE
7	LITTLE (halfling, gnome, goblin)	20	ENORMOUS
8	SMALL (dwarf)	21	HUMONGOUS
9	MEDIUM (elf)	22	GIGANTIC
10	AVERAGE (human, normal)	23	TITANIC
11	BIG (orc)	24	COLOSSAL
12	VERY BIG (troglodyte, minotaur)	25	GARGANTUAN

OLC

< > oset size

Usage : oset size <value>

SPELL AND SKILL ID'S

Please keep this in mind when choosing spells, and the level of the spells in a particular item.

WARNING: With the addition of new skills and spells, some of these values may have changed.

NAME	ID #	NAME	ID #	NAME	ID #
NONE	0	RAGE	142	GRIM WARD	386
ARMOR	1	GORE	143	LORE	387
TELEPORT	2	MEDITATE	144	REGENERATE	388

BLESS	3	SWEEP	145	SHARED VITALITY	389
BLINDNESS	4	SOULCLOAK	146	DUST OF JONAS	390
BURNING HANDS	5	SPIN KICK	147	FOULBLADE	391
CALL LIGHTNING	6	QUIVERING PALM	148	BIND SOUL	392
CHARM PERSON	7	NERVESTRIKE	149	PLAGUE	393
CHILL TOUCH	8	COMMAND ANIMAL	150	SHROUD OF DARKNESS	394
DIVINE INTERVENTION	9	PROTECT DEATH	151	CONTROL UNDEAD	395
COLOUR SPRAY	10	TRANSPORT VIA PLANT	152	BLIGHT	396
MAGE SWORD	11	CHANGE STAFF	153	CALL OF DIS	397
CREATE FOOD	12	SLOW	154	RAISE DEAD	398
CREATE WATER	13	FEEBLEMIND	155	ETHEREAL CORPSE	399
CURE BLIND	14	GOODBERRY	156	HAND OF THE GODS	400
CURE CRITIC	15	COMMUNE	157	SPIRITUAL GUARDIAN	401
CURE LIGHT	16	ANIMAL FRIENDSHIP	158	SOUL SYPHON	402
CURSE	17	ENTANGLE	159	DARKFIRE	403
DETECT EVIL	18	BARKSKIN	160	CLAWRAKE	404
DETECT INVISIBLE	19	KNOW MONSTER	161	WAR MARCH	405
DETECT MAGIC	20	HEROES FEAST	162	DIRGE OF DEATH	406
DETECT POISON	21	FAERIE FIRE	163	GELSEWHERE TUNE	407
DISPEL EVIL	22	FAERIE FOG	164	LULLABY	408
EARTHQUAKE	23	GEYSER	165	LARGO/BATTLE HYMN	409
ENCHANT WEAPON	24	POLYMORPH	166	ALLEGRO/HARMONY	410
ENERGY DRAIN	25	WOLF CLAWS	167	ANDANTE/HILLS HALF	411
FIREBALL	26	SUPERIOR BREW	168	DISCORDIA	412
HARM	27	STONE BLAST	169	ILLIAD/TALE VALOR	413
HEAL	28	DEHYDRATE	170	SOLILOQUY	414
INVISIBLE	29	HAWK EYES	171	ADAGIO/DRAIODOIR	415
LIGHTNING BOLT	30	CHILL BLOOD	172	DEAD EYES	416
LOCATE OBJECT	31	CONVERT MANA	173	WAIL	417
ZAP	32	WATER WALK	174	SOULTAP	418
POISON	33	FIRE BREATH	175	PASTORAL	419
PROTECT FROM EVIL	34	GAS BREATH	176	REQUIEM	420
REMOVE CURSE	35	FROST BREATH	177	ARMOR USE	421
SANCTUARY	36	ACID BREATH	178	SHIELD USE	422
SHOCKING GRASP	37	LIGHTNING BREATH	179	ROOM TOSS	423
SLEEP	38	QUAFF FIREBREATHER	180	COMBOS	424
STRENGTH	39	UNHOLY AURA	181	SURVEY	425
SUMMON	40	PURIFY	182	FISHING	426
GROUP SANCTUARY	41	STICKS TO SNAKES	183	BUTCHERING	427
MIRACLE	42	TORNADO	184	PRESERVING	428
CURE	43	FALKINS FLURRY	185	COOKING	429
SENSE LIFE	44	TSUNAMI	186	GATHERING	430
SNEAK	45	SHRIEKING SOULS	187	BREWING	431
HIDE	46	POLY. PLANTFORM	188	POISONCRAFT	432
STEAL	47	POLY. BATFORM	189	SKINNING	433
BACKSTAB	48	LIGHT	190	TANNING	434
PICK LOCKS	49	DEATH FOG	191	SPINNING	435
KICK	50	ROT	192	WEAVING	436
BASH	51	DETECT GOOD	193	TAILORING	437
RESCUE	52	BLOODLUST	194	PROSPECTING	438
IDENTIFY	53	DRAIN	195	MINING	439
INFRAVISION	54	PROTECT FROM GOOD	196	POLISHING	440
DISPEL MAGIC	55	LEVITATE	197	SMELTING	441
FEAR	56	WRAITHFORM	198	FORGING	442
DIMENSION DOOR	57	VAMPIRIC DRAIN	199	TIMBER	443

METEOR STORM	58	GRAPPLE	282	LUMBERJACKING	444
CURE SERIOUS	59	DISEASE	300	MILLING	445
VIGOR	60	SACRIFICE	301	WOODWORKING	446
ELEMENTAL SUMMON	61	GASEOUS FORM	302	INSTRUMENT MAKING	447
POWER HEAL	62	GROUP ARMOR	303	FLETCHING	448
WIZARD EYE	63	MASS	304	PAPERMAKING	449
DISINTEGRATE	64	EMBALM	305	BOOKBINDING	450
WEB	65	SENSE UNDEAD	306	DIVINING	451
SATIATE	66	REDUCE	307	HARNESSING	452
MAJOR BREW	67	ENLARGE	308	FOCUSING	453
MINOR BREW	68	HAVEN	309	THAUMATURGY	454
HASTE	69	INVISIBLE TO UNDEAD	310	STAVING	455
PORTAL	70	TRIP	311	SCRIBING	456
FIRESTORM	71	PRECISION	312	PHYLACTERY	457
ICESTORM	72	PEEK	313	CHIRUGY	458
FLY	73	PALM	314	CARVING	459
CRYSTAL EYES	74	CHANGE TARGET	315	BONECRAFTING	460
ACID BLAST	75	RIPOSTE	316	EVADE	461
ACID STORM	76	BLACKSMITHING	317	FOCUS	462
FULL HEAL	77	HAGGLE	318	WARPAINT	463
STONE SKIN	78	FORAGE	319	TOUGHNESS	464
WITHER	79	SCARE	320	DIVINE SHIELD	465
MOON	80	LAY HANDS	321	BATTOU JUTSU	466
CREATE IDENTIFY	81	GLORY	322	CONSECRATE	467
SHIELD	82	PRAYER	323	ENDURANCE	468
SYPHON	83	ZEAL	324	INTERVENTION	469
HELLSTREAM	84	DEFEND GROUP	325	SPIRIT OF BUSHIDO	470
REFRESH	85	CRUSADE	326	SEPPUKU	471
HOLY WORD	86	CHARGE	327	SECOND SURPRISE	472
BREATHE WATER	87	BLOCK	328	ASSIMILATE	473
ASTRAL WALK	88	TUMBLE	329	GLARE	474
FUBAR	89	COUNTERATTACK	330	SNAPSHOT	475
WARCRY	90	VITALS PUNCH	331	DEEPDRAW	476
DEATHSTROKE	91	FEINT	332	TERROR	477
DODGE	92	SMITE	333	DEATH KNELL	478
PARRY	93	TURN	334	KYUDO	479
BERSERK	94	CLIMB WALLS	335	SNIPE	480
BIND	95	POISON	336	PASS WITHOUT TRACE	481
MULTI ATTACK	96	DUAL WIELD	337	CAMOUFLAGE	482
RETREAT	97	ARCHERY	338	DEATHBOND	483
HUNT	98	CALL MOUNT	339	DEATHGRIP	484
CIRCLE	99	TAME	340	DAKHEVA	485
SET TRAP	100	LEATHERWORKING	341	ETUDE	486
SCOUT	101	WHIRLWIND	342	CONDUCT	487
FEIGN DEATH	102	AWARENESS	343	CHARM	488
DISARM	103	BLIND FIGHTING	344	BLAST	489
BARGE	104	GARROTTE	345	BLADE BARRIER	490
THIRD ATTACK	105	GEM CUTTING	346	STASIS	491
SWIM	106	SHIHONAGE	347	UNHOLY WORD	492
DISGUISE	107	KOKYONAGE	348	COUNTERSPELL	493
RIDE	108	ASSASSINATE	349	BLUR	494
SACRIFICE	109	PURIFY	350	ABJURE	495
FIND TRAPS	110	LURE	351	DEMONFORM	496
DISARM TRAPS	111	CURE DISEASE	352	ICE SHIELD	497
SET SNARES	112	ENVENOM	353	SHOCK SHIELD	498

CAUSE LIGHT	113	TRUE SEEING	354	DEADCRY	499
POWER HARM	114	GOUGE	355	DEATH VOICE	500
CAUSE SERIOUS	115	CURE	356	DRAGON STRIKE	501
MANA	116	REJUVENATE	357	INSTRUMENT MASTERY	502
FLAMESTRIKE	117	MIRROR IMAGE	358	SPEC FIRE	503
DISPEL GOOD	118	CORPSE VISAGE	359	SPEC ICE	504
TURN DEAD	119	BLUNT WEAPONS	360	SPEC MORDENT	505
REMOVE PARALYSIS	120	NONE	361	NONE	506
ANIMATE DEAD	121	EDGED WEAPONS	362	REVERBERATE	507
KNOW ALIGNMENT	122	NONE	363	CHAIN LIGHTNING	508
PARALYZE	123	NONE	364	STATIC FIELD	509
CALM	124	NONE	365	FROSTBITE	510
VENT	125	NONE	366	BLIZZARD	511
ENCHANT ARMOR	126	NATURAL WEAPONS	367	STONEWALL	512
FIRESHIELD	127	RANGED WEAPONS	368	FRACTURE	513
DICTUM	128	NONE	369	ZOMBIE FORM	514
PWORD BLIND	129	CRITICAL HITS	370	VISCERA DRAIN	515
FAMILIAR	130	TWO HANDED	371	BONE ARMOR	516
CREEPING DEATH	131	MORTIFY	375	CONFUSE	517
GUST OF WIND	132	PASSWALL	376	HOLY WEAPON	518
SILENCE	133	HAMSTRING	377	VIVIFY	519
SUNRAY	134	GROUP HEAL	378	ALACTRITY	520
FIND TRAPS	135	REDEMPTION	379	CELERITY	521
MOUNT	136	IMPALE	380	HOLY STEED	522
DRAGON RIDE	137	RESIST FIRE	381	CHROMATIC ORB	523
KNOCK	138	RESIST LIGHTNING	382	WILD MAGIC BURST	524
SENSE OBJECT	139	RESIST COLD	383	HOLY GATE	525
CONTROL WEATHER	140	RESISTANCE	384	WEIGHT OF FAITH	526
MAGE HEAL	141	FISTS OF FURY	385	MANA RAVAGE	527

AFFECTS

An item affect is a particular effect the item has upon the holder/wielder/wearer's statistics. There can be a maximum of THREE affects on an item.

Manual

Each affect requires its own 'A' flag to let the MUD know that there is more than one affect. Thus, a sword that added one to a character's strength and -10 to his hit points would be:

```
A
1 1
A
13 -10
```

The first value is the type of affect, the second the value. In the case of skills, the second value is the percentage chance that the skill use increases/decreases. In the case of a spell, a second value is unnecessary.

Below is a list of the different types of affects, and their values. For ARMOR CLASS (17), PARALYZATION (20), WAND/STAFF/ROD (21), PETRIFICATION (22), BREATH WEAPON (23), SPELL (24), SPELL FAIL (54), SAVE ALL (55), and SKILL FAIL (56), a negative value is more beneficial to the player.

0	NONE	
1	STRENGTH	Bonus/penalty to strength.
2	DEXTERITY	Bonus/penalty to dexterity.

3	INTELLIGENCE	Bonus/penalty to intelligence.
4	WISDOM	Bonus/penalty to wisdom.
5	CONSTITUTION	Bonus/penalty to constitution.
6	<i>GENDER</i>	<i>Internal use only. DO NOT USE!</i>
7	<i>CLASS</i>	<i>Internal use only. DO NOT USE!</i>
8	<i>LEVEL</i>	<i>Internal use only. DO NOT USE!</i>
9	AGE	Increase/decrease to age.
10	WEIGHT	Increase/decrease to weight.
11	HEIGHT	Increase/decrease to height.
12	MANA	Adds to max value.
13	HITPOINTS	Adds to max value.
14	STAMINA	Adds to max value.
15	<i>GOLD</i>	<i>Internal use only. DO NOT USE!</i>
16	<i>EXPERIENCE</i>	<i>Internal use only. DO NOT USE!</i>
17	ARMOR CLASS	Bonus/penalty to armor class
18	HIT ROLL	Bonus/penalty to hit.
19	DAMAGE ROLL	Bonus/penalty to damage done by player.
20	SAVE FORT/[PHYSICAL	Bonus/penalty to resistance roll.
21	SAVE REFLEX	Bonus/penalty to resistance roll.
22	SAVE PETRIFICATION	Bonus/penalty to resistance roll.
23	SAVE BREATH WEAPON	Bonus/penalty to resistance roll.
24	SAVE MENTAL	Bonus/penalty to resistance roll (most used).
25	INFRAVISION	Player will be affected by infravision.
26	ATTACK SPEED	Player will be affected by haste.
27	SNEAK	Player will have skill sneak.
28	HIDE	Player will have skill hide.
29	INVISIBLE	Player will be affected by invisibility.
30	VIGOR	Player will be affected by vigor.
31	SKILL BONUS 1	Player will have 1 point in a skill.
32	SENSE-LIFE	Player will be affected by sense life.
33	BLIND	Player will be affected by blindness.
34	DETECT INVIS	Player will be affected by detect-invisibility
35	<i>SANCTUARY</i>	<i>Player will be affected by sanctuary. DO NOT USE!</i>
36	<i>NO HUNGER</i>	<i>Player will never be hungry. DO NOT USE!</i>
37	<i>NO THIRST</i>	<i>Player will never be thirsty. DO NOT USE!</i>
38	<i>WIZINVISIBLE</i>	<i>Player will be invisible below current level. DO NOT USE!</i>
39	SILENCE	Player will be unable to speak.
40	FLYING	Player will be affected by fly.
41	<i>SPECIAL</i>	<i>DO NOT USE!</i>
42	HIT & DAM	Both combined in one flag.
43	AQUA LUNG	Player will be able to breathe under water.
44	DETECT MAGIC	Player will see magical auras on magic items.
45	DETECT EVIL	Player will see red aura on evil mobs/objects.
46	PARALYSIS	Player will be paralyzed.
47	FIND TRAPS	Player will be able to see traps.
48	<i>NONE</i>	<i>DO NOT USE!</i>
49	DEAF	Player will be unable to hear spoken communication.
50	SENSE OBJECT	Player will be able to see dark objects.
51	<i>DODGE</i>	<i>Object will affect player's dodge ability. DO NOT USE!</i>
52	SEE LIFEFORM	Player will be able to see hidden mobs.
53	HP & MANA	Both combined in one flag.
54	SPELL FAIL	Object will affect player's casting abilities.
55	SAVE ALL	Object affects all the player's saving throws.
56	SKILL FAIL	Object will affect player's skill abilities.
57	CHARISMA	Bonus/penalty to charisma.

58	DETECT GOOD	Player will see white aura on good mobs/objects.
59	UNHOLY AURA	Player will be affected by an unholy aura. DO NOT USE!
60	AWARENESS	Player cannot be backstabbed or nervestriking
61	LUCK	Bonus/penalty to luck.
62	SIZE	Increase/decrease to size.
63	NONE	DO NOT USE!
64	BLOODLUST	Player will be affected with bloodlust.
65	WRAITHFORM	Player will be affected with wraithform. DO NOT USE!
66	MAGIC RESISTANCE	Increase/decrease to magic resistance.
67	SKILL BONUS 3	Player will have 3 skill points in that skill.
68	GORE	Object will affect player's gore ability. DO NOT USE!
69	RIPOSTE	Object will affect player's riposte ability. DO NOT USE!
70	CHARGE	Object will affect player's charge ability. DO NOT USE!
71	PARRY	Object will affect player's parry ability. DO NOT USE!
72	CLIMB WALLS	Object will affect player's climb walls ability.
73	NONE	DO NOT USE!
74	RESIST FIRE	Object will affect player's resistance to fire
75	RESIST LIGHTNING	Object will affect player's resistance to lightning.
76	RESIST COLD	Object will affect player's resistance to cold.
77	DIG	Object can be used to reveal buried objects.
78	KNOCKDOWN	Player will be affected with knockdown.
79	UNHOLY SYMBOL	Object will affect unholy symbol ranks.
80	NATURE SYMBOL	Object will affect nature symbol ranks.
81	REGEN MANA	Object will affect player's mana regen.
82	REGEN HIT	Object will affect player's hit regen.
83	REGEN STAMINA	Object will affect player's move regen.
84	CARRY WEIGHT	Increases weight a player can carry.
85	CARRY NUMBER	Increases the number of items a player can carry.
86	HOLY SYMBOL	Object will affect player's holy symbol ranks.
87	RESIST CUT	Object will provide ranks in resist cut.
88	RESIST PIERCE	Object will provide ranks in resist pierce.
89	RESIST BLUDGEON	Object will provide ranks in resist bludgeoning.
90	RESIST LACERATING	Object will provide ranks in resist lacerating.
91	RESIST CONSTRUCT	Object will provide ranks in resist constructs.
92	RESIST ACID	Object will provide ranks in resist acid.
93	RESIST AQUATIC	Object will provide ranks in resist aquatic.
94	RESIST TERRA	Object will provide ranks in resist terra.
95	RESIST SONIC	Object will provide ranks in resist sonic.
96	RESIST POISON	Object will provide ranks in resist poison.
97	RESIST MENTAL	Object will provide ranks in resist mental.
98	RESIST NECROTIC	Object will provide ranks in resist necrotic.
99	RESIST DIVINE	Object will provide ranks in resist divine.
100	RESIST HEALING	Object will provide ranks in resist healing.
101	CAST SPEED	Object will increase cast speed.
102	CRITICAL HIT	Object will increase critical hit ranks.
103	SKILL BONUS 2	Object will provide 2 ranks in a skill.
104	WEIGHT OF FAITH	Object will provide ranks in weight of faith.
105	DAMAGE REDUCE	Object will increase damage reduction.
106	MAGIC AC	Object will provide ranks in magic ac.
107	SPIRIT AC	Object will provide ranks in spirit ac.
108	WEAPON SKILLS	Object will provide ranks in weapon skills.
109	SNOWSHOE	Object will allow player to walk on snow
110	PRIME REQ	Adds a bonus to the primary stat of the class of player
111	FLAMING WEAPON	Adds flaming weapon damage to items that hit someone
112	FREEZING WEAPON	Adds freezing weapon damage to items that hit someone

113	SHOCKING WEAPON	Adds shocking weapon damage to items that hit someone
114	ACID WEAPON	Adds acid weapon damage to items that hit someone
115	TIMEPIECE	Allows the player to hear the tickcounter no matter where in the world

OLC

< > oset affect

Affect not found. (cmmnd = 109)

Usage : oset affect <affect> <value>

Valid affect fields are:

None		
Strength	Dexterity	Intelligence
Wisdom	Constitution	Gender
Class (NIU)	Level (NIU)	Age
Weight	Height	Mana
HitPoints	Stamina	Gold (NIU)
Exp (NIU)	Armor	Hitroll
Damroll	Save_Physical	Save_Reflex
Save_Petrification (NIU)	Save_Breath (NIU)	Save_Mental
Infra	AttackSpeed	Sneak
Hide	Invis	Vigor
SkillBonus1	Sense_Life	Blind
Detect_Invis	Sanctuary	No_Hunger
No_Thirst	Wizinvis	Silence
Fly	Special	Hitroll_and_Damroll
Aqualung	Detect_Magic	Detect_Evil
Paralysis	Find_Traps	BV2
Deaf	SenseObject	Dodge (NIU)
SeeLife	Hitpoints_and_Mana	Spell_Fail
Save_All	Skill_Fail	Charisma
Detect_Good	Unholy_Aura	Awareness
Luck	Size	BV3
Bloodlust	Wraithform	Magic_Resistance
SkillBonus3	Gore (NIU)	Riposte (NIU)
Charge (NIU)	Parry (NIU)	Climb
BV4	ResistFire	ResistLightning
ResistCold	Digging	Obsolete
UnholySymbol	NatureSymbol	ManaRegen
HitpointRegen	StaminaRegen	CarryWeight
CarryNumber	HolySymbol	ResistCut
ResistPierce	ResistBludgeon	ResistLacerating (NIU)
ResistConstrict (NIU)	ResistAcid	ResistAquatic
ResistEarth	ResistSonic	ResistPoison
ResistMental	ResistNecrotic	ResistDivine
ResistHealing	CastSpeed	CriticalHit
SkillBonus2	Weight_of_Faith	DamageReduce
Magical Protection	Spiritual Protection	Weaponskills

The field 'none' will remove all affects. Any other affect with a value of 0 will remove that affect. The maximum number of affects for any object is 5.

Example : oset affect str 2

Note: the format to set SkillBonus1 and SkillBonus2 is:

oset aff skillbonus1 <skill num>

Where [skill number](#) is the spell or skill id number.

OBJECT ARCHETYPE

```
#<vnum> Version 4
namelist~
short desc~
long desc~
~
<object type> <wear flag> <extra flag> <comp flag> <anti flag> <min level>
<object values (six digits)>
<weight> <value> <rent cost> <size>
E
keywords~
extra desc
~
A
<apply type> <apply amount>
```

TIPS AND OBSERVATIONS

- Items with apply to stats of +3 should be very rare and hard to get.
- Many small items make an area more interesting than a few incredibly powerful items, for the most part. This is very subjective, however.
- Remember to put take flags on almost everything. It's easier to put a take flag on everything and take off the ones you don't need (like fountains and such).
- Don't feel limited to items players consider 'useful' such as weapons and armor. A giant (untakeable) monolith, and other strange and odd items can add a lot of atmosphere to an area.
- Eliminating the long description on an item will make a blank line appear to the room. This will show the player that there is in fact an object in the room, but they will have to read more carefully to find out what it is. The same effect can be achieved by making the item 'wizinvisible' – this method is greatly preferred.
- Item types should be set rationally. Rings, bracelets and other jewelry should be wearable TREASURE, not armor.
- Plain clothes should be item type WORN.
- You can avoid piling many “anti-” flags onto an item. Remember that druids and clerics cannot use edged weapons, etc.

IX ZONE FILE

The area.zon file tells the MUD where everything goes; from the goblin in the pit to what the knight is wielding to placing the fountain in the temple square. It also controls how and when the area is reset.

There are two main parts to every area.zon file: the header information and a list of commands to be followed by the MUD. Here is a header of a zone file for an example, followed by a line-by-line example:

```
#22
Example Area!Builder~
2299 20 2 mn
* minRecLevel 1
* maxRecLevel 13
* startingroom 1
<list of commands>
S
#999999
```

\$~

EXPLANATIONS

#22

This is the zone number of the area.

Example Area!Builder~

The [name of the area and the area's writer](#).

2299 20 2 mn

The first number is the 'top' or 'last' number of the zone -- the vnum of the [final room of the area](#). The second number is the [number of ticks between resets](#) of the area. The third number controls [how the zone is reset](#). The fourth is a list of [zone flags](#).

* minRecLevel 1

* maxRecLevel 13

The [minimum and maximum](#) player levels that are recommended for the zone. This is entirely subjective and could be based on mob levels, difficulties, or other factors.

* startingroom 1

Gives the target room for the dirs command for players to find the zone.

<list of commands>

The [zone commands](#) are listed later in this section. Zone commands are used to stage a zone. They do things like open, close, lock, or unlock doors, load mobs or objects, equip or give an object to a mob, etc.

S

The S designates the end of the zone file.

#999999

\$~

End of the file characters.

OLC

Similar to the world and mob commands you need to be assigned to edit your zone. The basic zone commands are:

ZSTAT	This command shows the stats of the zone you are in.
ZLIST	Can give you a list of the mobs, objects, or rooms in a zone.
ZRESET	Will reset the zone but not like a reboot.
ZEDIT	This command is used to edit the zone header or commands.
ZSET	The command is used to change the header of the zone you are editing.
ZSAVE	This command saves the current zone file you are editing.
ZFLAGS	Used to see the commands in a room or the entire zone.
ZDELETE	Used to delete a zone reset command.

The below commands are used to create a command entry in your .zon file once you are in ZEDIT. We will discuss these in more detail with the zone commands they pertains to:

ZDOOR	This command enters a door reset command.
ZEQUIP	This command equips an object on a mob.
ZGIVE	This command gives and object to a mob.
ZLOAD	This command loads a mob or object into the current room.
ZPUT	This command puts an object in another loaded object.
ZFOLLOWER	This command loads a follower mob for the previously loaded mob.
ZMOUNT	This command loads a mount for the previously loaded mob.

ZSTAT

This command can give you the header information about a zone you are in using `zstat`. An ZSTAT of zone 3100 will look like this:

```
AUTHOR      NAME                               Vnum(Rnum)  AGE/Lifespan  Last Room #
-----
Kallisti    City of Midgaard                      31 ( 26)   13/17        3199
Reset mode: Always resets
Flags: No-Shards
Builders: Descent Ivy
Level range: 1 - 100
This zone owns:    0 rooms.    91 objects.    24 mobs.
Average mob level: 36.00
Weighted Average mob level (based on number of loads): 25.00
Weighted Average mob level (based on number of times killed): 0.00
```

The same zone in the file looks like this:

```
#31
City of Midgaard!Kallisti~
3199 21 2 m
* Builder Ivy
* minRecLevel 1
* maxRecLevel 100
* Builder Descent
[commands omitted]
```

ZLIST

This command can give you a list of all rooms, mobs, or objects in the zone you are standing in.

The list includes:

- `zlist room`: the room number and its name.
- `zlist mob`: the mob number, its short description, level, race, disposition, number of them in the game, and the number of times they have been killed this boot.
- `zlist object`: the item number, its short description, total number of them in the game and, of those, how many are stored in vaults.

ZRESET

Causes a zone to reset before the mud would have typically done so. This will not load objects on mobs again unless the `maxexist` is greater than the number of objects in the game.

```
zreset < zone number | . >
```

ZEDIT

To start to edit zone settings you enter `zedit` which will begin editing the zone you are in and brings up the following:

Other ZEDIT options:

```
zedit - begin editing the zone you are in
zedit done - stop editing your zone (without saving)
zedit save - save the current zone to file
zedit create - create a new zone (obj, wld, mob, zon files) (admin only)
zedit deny - turn off global zone editing (admin only)
zedit allow - turn on global zone editing (admin only)
```

You begin editing zone #1. Use ZSET to make changes.
All flags turned ON

Note: the comment at the bottom is about ZFLAGS.

When you are done editing the zone:

- Use `zedit save` or `zsave` to save your work.
- Use `zedit done` to exit from the zone editor.

You need to be in ZEDIT to be able to edit the zone's header information or add or remove commands.

ZSET

To edit the zone, you need to be in `zedit` and use any of the `zset` commands. Plain `zset` brings up the following:

```
< > zset
Usage   : zset <option> [value]
```

Valid options are:

name	set zone name
author	set zone author
top	set top room vnum (last room to be saved in the zone)
lifespan	set number of ticks between resets
type	set reset type
minlevel	set recommended minimum level
maxlevel	set recommended maximum level

Or any of the following [zone flags](#):

<code>private</code>	-- Hides zone from lower levelImms
<code>warded</code>	-- Blocks magic transport
<code>arena</code>	-- Makes zone an arena
<code>houseClan</code>	-- Marks zone for use by HUD
<code>pkill</code>	-- Zone allows open PK
<code>chaotic</code>	-- PK deaths count normally
<code>noWeather</code>	-- No weather related magic or messages
<code>quiet</code>	-- No yelling.
<code>noOutlaw</code>	-- Outlaw cannot enter
<code>outlaw</code>	-- Must be outlaw to enter
<code>opaque</code>	-- Where/hunt disabled.
<code>static</code>	-- Prevents random obj loads.
<code>noShard</code>	-- Prevents shard loads
<code>hidden</code>	-- Hidden from player view on AREAS command

For detailed help, type `zset <option>` with no value.

Every field has more information about its formats and flags if you do `zset <command>`.

The `zset` command allows you to edit zone level information but not zone commands. To enter or delete zone commands you use the `z` command for that command or `zdelete`.

ZSAVE

Used when you are done editing the zone and want to save it.

ZFLAGS

The ZFLAGS command is a filtering command that determines which of the zone reset commands you will see. You must

give it an initial setting before it will display anything, ('zflags all' for example), to show everything. If you just want to focus on your doors you might want to just set your zflags filter to 'zflags doors' so the other zone reset commands don't clutter your display.

```
< > zflags list
Usage   : zflags [flag]
```

Valid flags are:

```
show          show all reset commands in the zone
all           turn all flags ON
none         turn all flags OFF
doors        show door resets
mobs         show mob resets
oloads       show objects that load into the room
gives        show objects given to mobs
equips       show objects equipped on mobs
puts         show objects put in other objects
removes      show objects removed from the room
default      show the default mob
<min> <max> show all zflags in a range (0 10000 is useful to see ALL flags in
zone)
help         show this list
```

Zflags will accept multiple flags on the same line. Zflags with no arguments will show the resets in the current room.

You currently have the following flags ON:

```
Doors Mobs ObjectLoads ObjectGives ObjectEquips ObjectPuts
ObjectsRemoves DefaultMob
```

With ZFLAGS ALL on you can type ZFLAGS and see all the commands for the room you are in or ZFLAGS 1 10000 to see all the commands in the zone.

ZDELETE

Used to delete a zone reset command. To use this command, you will need to know the zone reset command number. You can get the command number using ZFLAGS 1 10000.

```
Usage   : zdelete <command number>
```

AREA NAME AND BUILDER

This is the name of the zone and the primary builder that will show up in the AREAS command. There should be an ! between the name of the area and the builder's name and a ~ after the builder's name.

Manual

```
Example Area!Builder~
```

OLC

```
< > zset name
Usage   : zset name <zone name>
Example : zset name Southwestern Midgaard
```

```
< > zset author
Usage   : zset author <zone author name>
Example : zset author Blackfell
```

ZONE RESETS, TOP OF THE ZONE, AND NUMBER OF TICKS

The first number is the 'top' or 'last' number of the zone -- the vnum of the final room of the area.

The resets tell the MUD when to reset (or repop, as it is commonly referred to) the zone, which restores it back to its original state. Mobs, objects, etc... are loaded back into the game, depending on the max_exist variable, which is explained in the Zone Commands section.

The reset time is measured in ticks, or MUD hours. A setting between 25-35 is considered the average. The reset type tells the MUD under what conditions the zone may be reset.

0	NEVER	The zone loads at the MUD's boot time, and that is all.
1	EMPTY	When the reset time is reached, the zone resets only if no players are there.
2	ALWAYS	The zone resets when the reset time is reached, regardless of who is in it.

OLC

```
< > zset top
Usage   : zset top <last room vnum>
Example : zset top 3399
```

```
< > zset lifespan
Usage   : zset lifespan <# of ticks>
Example : zset lifespan 30
```

```
< > zset type
The sun slowly disappears into the western horizon.
The lightning has gone, but it is still raining.
Usage   : zset type <reset type>
```

Valid reset types are:

```
0      zone NEVER resets
1      zone resets only when no players are in it
2      zone resets normally
Example : zset type 2
```

ZONE FLAGS

Zone flags are special flags for the zone. A zone can have more than one flag.

Manual

0	NONE	The zone has no flags.
a	PRIVATE	Like code k Opaque below but low level Imms also can't goto this zone.
b	WARDED	Zone blocks magical travel.
c	ARENA	Zone is an arena zone.
d	HOUSE CLAN	Zone is for houses or clan halls.
e	PKILL	Open PKill is allowed in this zone.
f	CHAOTIC	PK deaths in this zone count normally.

g	NOWEATHER	Weather messages are suppressed.
h	QUIET	No yelling in this zone.
i	NOOUTLAW	Outlaw players can't enter this zone.
j	OUTLAW	Only outlaws can enter this zone.
k	OPAQUE	Where, Hunt, etc. don't work in this zone.
l	STATIC	Blue weapons don't load here.
m	NO SHARD	Shards won't spawn here.
n	HIDDEN	Zone won't show up on a player's areas list.
o	DIRS	Allows the zone to show up in the dirs command
p	NORECOMMEND	Removes the zone from the equipment showing up on recommend.

OLC

Usage : zset <option> [value]

Or any of the following zone flags:

```

private      -- Hides zone from lower levelImms
warded       -- Blocks magic transport
arena        -- Makes zone an arena
houseClan    -- Marks zone for use by HUD
pkill        -- Zone allows open PK
chaotic      -- PK deaths count normally
noWeather    -- No weather-related magic or messages
quiet        -- No yelling.
noOutlaw     -- Outlaw cannot enter
outlaw       -- Must be outlaw to enter
opaque       -- Where/hunt disabled.
static       -- Prevents random obj loads.
noShard      -- Prevents shard loads
hidden       -- Hidden from player view on AREAS command

```

ZONE MAX AND MIN LEVELS

The minimum and maximum player levels that are recommended for the zone. This is entirely subjective and could be based on mob levels, difficulties, or other factors.

Manual

```

* minRecLevel 1
* maxRecLevel 13

```

OLC

```

< > zset minlevel
Usage : zset minlevel <#>
Example : zset minlevel 30

```

```

< > zset maxlevel
Usage : zset maxlevel <#>
Example : zset maxlevel 30

```

ZONE COMMANDS

The zone commands tell the MUD exactly how to reset a zone, from mobs to objects, to closing doors. Each command is

given its own line, one after the other, until the end of the file. Comments can be added for clarity sake (e.g. * big guy with sword).

<if-flag>	<p>An if flag tells the MUD to look at the previous command. If the if-flag is 0, the MUD will try to execute the command regardless of the previous command. If the if-flag is any other than a zero (one is most commonly used), then that particular command will only execute if the command immediately preceding it did as well.</p> <p>This is useful for objects loaded onto mobs; you don't want to load a shield on a guard hasn't been loaded yet, for example. There are other uses as well, that should become apparent as you build...</p>
<max exist>	<p>This is the maximum number of whatever this is that can load in the entire MUD. If on a mob command, this will prevent excess mobs being loaded into an area. On an object command, this limits how many of this object will be available in the game. For items not limited, it is common to put a very high number in this slot, usually 100 to 1000.</p> <p>E.g. To have an item load once per boot, set the max exist to 1. This way, the MUD will load the item on the mob so that players can "run" the item. Items already in player houses and the characters themselves are not affected.</p>
[percent]	<p>This is the percentage chance for the zone command to happen. This is optional and should only be used for unusually powerful/rare items. If omitted the % defaults to 100.</p>

THE 'M' COMMAND

The 'M' zone command loads a mobile to a certain place in the MUD.

Manual

M <if-flag> <mob vnum> <max exist> <room vnum> [percent]

OLC

< > zload

Usage : zload <obj|mob> <obj/mob vnum> [max existing] [load chance]

THE 'O' COMMAND

The 'O' zone command loads an object into a room. This is mostly used for common or immovable objects.

Manual

O <if-flag> <object vnum> <max exist> <room vnum> [percent]

OLC

< > zload

Usage : zload <obj|mob> <obj/mob vnum> [max existing] [load chance]

THE 'G' COMMAND

The 'G' zone command loads an object and gives it to a mobile loaded in the command immediately previous. Note that this is different from the 'E' command below, in that the 'E' command loads an object and makes the mob equip it. A 'G'

command object stays in the mob's inventory.

Manual

G <if-flag> <object vnum> <max exist> [percent]

OLC

< > zgive

Usage : zgive <object vnum> <mob reset number> [max existing] [load chance]

THE 'E' COMMAND

The 'E' zone command loads an object and makes the mob loaded in the command immediately before this one equip it.

Manual

E <if-flag> <object vnum> <max exist> <equipment position> [percent]

Where equipment position is one of the following:

#	Position	#	Position	#	Position	#	Position
0	WEAR LIGHT	10	WEAR FEET	20	WEAR ABOUT	30	WEAR BACK
1	WEAR FINGER R	11	WEAR FOOT L	21	WEAR WAIST	31	WEAR FULL BODY
2	WEAR FINGER L	12	WEAR FOOT R	22	WEAR WRIST R	32	WEAR SHIRT
3	WEAR NECK 1	13	WEAR HANDS	23	WEAR WRIST L	33	WEAR SURROUNDING
4	WEAR NECK 2	14	WEAR HAND L	24	WIELD	34	WEAR ORBITING
5	WEAR BODY	15	WEAR HAND R	25	HOLD	35	WEAR FLOATING
6	WEAR HEAD	16	WEAR ARMS	26	WEAR FACE	36	WEAR BADGE
7	WEAR LEGS	17	WEAR ARM L	27	WEAR EAR R	37	WEAR ANKLE
8	WEAR LEG L	18	WEAR ARM R	28	WEAR EAR L		
9	WEAR LEG R	19	WEAR SHIELD	29	WEAR EYES		

OLC

< > zequip

Usage : zequip <object vnum> <mob reset number> <position> [max existing] [load chance]

Mob reset number is the reset command number of the mob, as seen with the zflags command. Position must be one of the following:

```

light    lfinger    rfinger    neck1     neck2
body     head       legs       lleg      rleg
feet     rfoot      lfoot      hands     lhand
rhand    arms       rarm       larm      shield
about    waist      lwrist     rwrist    wielded
held     face       ear1       ear2      eyes
surround orbit    float     badge     anklets

```

Example : zequip 3021 5 wield 15 90

Would equip the mob specified by reset command 5 with a short sword, which would be wielded, as long as there aren't already 15 short swords in the game. There would be a 90% chance for this to execute.

THE 'P' COMMAND

The 'P' command loads an object, and places it into another object (container-type) that was previously loaded.

Manual

P <if-flag> <loaded object vnum> <max exist> <into container vnum> [percent]

OLC

< > zput

Usage : zput <object vnum> <container reset num> [max existing] [load chance]

Container reset number is the reset command number of the container object, as seen with the zflags command.

Example : zput 3021 5 15

Would put a short sword in the object specified by reset command 5, as long as there aren't already 15 short swords in the game.

THE 'D' COMMAND

The 'D' command can open, close, or close and lock a door.

Manual

D <if-flag> <room vnum> <exit #> <door state>

Where exit # is the numeric equivalent of the exit as so:

	Exit		Door State
0	NORTH	0	OPEN
1	EAST	1	CLOSED
2	SOUTH	2	CLOSED AND LOCKED
3	WEST		
4	UP		
5	DOWN		

OLC

< > zdoor

Usage : zdoor <direction> <position>

Direction must be a valid movement direction.

Position must be one of the following:

open Door resets open
closed Door resets closed
locked Door resets closed and locked

Example : zdoor n closed

THE 'T' COMMAND

The 'T' command is used to load a mount for a mob that was previously loaded.

Manual

T <if_flag> <mount vnum> <load room>

OLC

< > zmount

Usage: zmount <mob reset number> <mob vnum> [load chance]

THE 'F' COMMAND

The 'F' command is used to load a follower for a mob that was previously loaded.

Manual

F <if_flag> <follower vnum> <load room>

OLC

< > zfollower

Usage: zfol <mob reset number> <mob vnum> [load chance]

THE '*' COMMAND

The '*' Command is used as a remark statement. The zone file will ignore any line that starts with this character. This is useful for making side comments about the zone or separating chunks of commands, making them easier to read.

While minRecLevel and maxRecLevel both start with a * the information contained is used by the mud for recommended levels for the area. Eventually the *'s will be removed but at this point the lines are optional. The same is true for additional builders.

ZONE ARCHETYPE

```
#<zone number>
name of area!name of creator~
<last room in area> <reset time> <reset type> <zone flags>
* minRecLevel <minimum recommended level for players in the zone>
* maxRecLevel <maximum recommended level for players in the zone>
[* builder <additional builder's name>]
<zone commands>
..
..
..
S
#999999
$~
```

TIPS AND OBSERVATIONS

- Remember, a functioning door is a door from both sides, and needs to be closed from both sides. Thus, 2 door commands for each door.
- The 'P' command gets confused if you try to load multiple objects into multiple containers IF the containers are all the same object. The solution is to set up blocks separated by asterisks for each container object in which items are being loaded.
- Make sure you list as text what you are doing such as

```
O 0 2202 5 2254 100      * load a fountain
M 0 2204 10 2232 100     * load a witch
```

- <max exist> does not affect how many items a shop can produce.
- Both rare items and trash should have low <max exist> values.
- Items should be listed in order so that those with lower <max exist> values load last. For example:

```
M 0 1000 1 1000 100      * load mob 1000 at room 1000
G 1 1000 10 100          * give obj 1000 to mob 1000
G 1 1001 5 100           * give obj 1001 to mob 1000
G 1 1002 3 100           * give obj 1002 to mob 1000
```

- To simulate a "clean repop" (as if the MUD just rebooted), use purge zonemob and then purge zoneobj (the order is very important!) and then type zreset . (the period means that you are resetting the current zone).

X SHOP FILE

The .shp file contains all the myriad information necessary to make a working shop in a MUD. Here is an example of a shop from the area.shp file, followed by a line-by-line explanation.

```
#2000~
2000
2001
2002
-1
-1
1.2
0.8
5
9
0
0
0
I don't have any of those!~
Are you sure that you have one?~
Sorry--I don't buy those!~
I can't afford that...sorry.~
You can't quite afford that yet...sorry.~
That will be %d coins.~
Here's %d coins for that.~
0
8
12
13
17
```

EXPLANATIONS

#2000~

This is the virtual number of the shopkeeper.

2000

...

-1

The shop sells these item vnums. Note that -1 represents an unused field.

1.2

0.8

The first number is the multiple of the markup in price for selling, the second the multiple for buying from the players.

5

...

0

These are the item TYPES the shop buys. (see 'object types' in section VIII of this handbook (this example shop buys weapons and armor). Note the 0s for unused fields.

I don't have any of those!~

...

Here's %d coins for that.~

These are all the messages the shopkeeper will say in particular situations. These are better explained in 'shop messages' below.

0

This is the shopkeeper's temper. A 0 in this field means the shopkeeper will simply frown when a player tries to buy something it can't afford. A 1 means the shopkeeper will toss the player out of the shop.

8

12

13

17

The hours that the shop is open. Please consult 'hours' below.

SHOP MESSAGES

The shop message section has seven different slots for messages. They range as follows (in order):

What the shopkeeper says when...

1	...he doesn't have that object to sell.
2	...the player doesn't have that object to sell.
3	...he doesn't buy that type of item.
4	...he doesn't have enough money to buy an object.
5	...the player doesn't have enough money to buy an object.
6	...he sells an object.
7	...he buys an object.

The variable %d should appear in messages 6 and 7 where the price of the object goes. In addition, note that each message needs to end with a tilde.

TEMPER

The temper field determines what the shopkeeper does when the player tried to buy something when they do not have enough gold.

0	The shopkeeper frowns.
1	The shopkeeper throws you out onto the street!

HOURS

The 'hours' fields are simple. The first two are the opening and closing hours of the shop, in 24-hour time. The third and fourth are ALSO the opening and closing times of the shop allowing for the shop to open and close more than once in a day.

8
12
13
17

(The example shop opens at 8 am, closes at noon -- lunch? -- reopens at 1 p.m., and closes at 5 p.m.)

0
24
0
0

(The example shop stays open and never closes.)

SHOP ARCHETYPE

```
#vnum~  
<item sold vnum 1>  
<item sold vnum 2> (-1 for unused values)  
<item sold vnum 3>  
<item sold vnum 4>  
<item sold vnum 5>  
<multiple for selling items>  
<multiple for buying items>  
<item type bought 1>  
<item type bought 2> (0 for unused values)  
<item type bought 3>  
<item type bought 4>  
<item type bought 5>  
<message 1>  
<message 2>  
<message 3>  
<message 4>  
<message 5>  
<message 6>  
<message 7>  
<temper>  
<open 1>  
<close 1>  
<open 2>  
<close 2>
```

TIPS AND OBSERVATIONS

- Any mob can be a shopkeeper... this can advance the plot of a particular area to no end if used cleverly.
- Shopkeepers don't have to buy or sell anything.
- Make sure your shopkeeper has NICE_THIEF set and a level higher than 75 to prevent theft. Or, use progs to prevent theft AND write some creative mob reactions!

XI QUEST FILE

In the days of old, warriors and adventurers proved their courage by undertaking great quests. Whether it was to slay the evil dragon, rescue the damsel in distress, or recover a powerful religious artifact, all quests were dangerous, but potentially rewarding, undertakings. In the realms of Kallisti, a quest can add a great deal of fun and flavor to your area.

Quests are not part of your area. You must contact the administration to have your quests approved and included in the proper files.

Here is an example, followed by a line-by-line breakdown:

```
#1
Find the Rainbow
~
Your quest is to find the rainbow staff and return it to Puff.
~
Puff exclaims, 'Thank you so much for returning my staff! Here is your reward,
brave adventurer.'
~
0 1 2 5 2 1
2 1000 50000 0 4 0
```

EXPLANATIONS

#1

This is the virtual number of this quest. Totally unique; no other quest in the DB will have this number. You must get a number assigned to each quest you build.

Find the Rainbow

~

This is the title of the quest, followed by a tilde on its own line.

Your quest is...

~

The description of the quest that the players will see when they are given the quest by the mob. Note the ~ on its own line.

Congratulations, you...

~

This is what the mob will say to the players when they complete the quest. Note the ~ on its own line.

0 1 2 5 2 1

The first value is the **minimum required level** for the quest. The second value, **repeatable**, tells whether a player may repeat the quest or not. The third value represents the **type of quest** this is. The fourth value is the **number of ticks** (MUD hours) in which the player must finish the quest. The fifth value, **vnum1**, is the **vnum of the mob, obj, or room** that is the target of the quest. Finally, if **vnum1** is for an obj, then **vnum2** is the **vnum of the mob to be given the obj**, otherwise set the sixth value to zero.

2 1000 50000 0 4 0

Now onto line two. The first value is the **vnum of the mob that initiates the quest**. The second value is the **gold**

reward of the quest, the third value is the **experience point reward**, the fourth is the **QP (quest point) reward**, and the fifth value is the **vnum of the object rewarded to the player**. Finally, the sixth value is the **gold cost charged** the player to participate in the quest.

DESCRIPTIONS

These should be self-explanatory; the title of the quest, the initial message, and the success message. All are followed by a tilde on a line by itself.

```
<Quest Title>
~
<Initial Message>
~
<Success Message>
~
```

MINIMUM LEVEL

This is used to set the minimum level required of the player who can take the quest. Use 51, 52, etc... for nobility levels. To additionally restrict who can take the quest (race, class, for example), use the mob Hatred Flags, as detailed in section VII. Remember that setting hatred flags does not make the mob attack those player types; only hatred flags plus the actual AGGRESSIVE flag can do this.

REPEATABLE

0	A one-time-only quest.
1	A repeatable quest.

TYPE

	Quest Type
1	Quest to kill a MOB
2	Quest to retrieve an OBJECT
3	Quest to get to a ROOM

TIMER

The time, in MUD hours, that the player has to complete the quest.

VNUM1, VNUM2

Vnum1 is the virtual number of the mob, object, or room that is the target of the quest. If it is for an object, vnum2 is the virtual number of a mob who will accept the obj. Otherwise, set this to 0.

QUEST MOB

The virtual number of the mob that initiates the quest.

QUEST REWARDS

The rewards of the quest; gold coins, experience points, or quest points. The player can also be given an object as a reward, which is specified in the next field, <obj_reward>. Set any of these to zero, if you do not wish to reward the player with that type of reward.

COST

The cost, in gold coins, the player is charged to undertake the quest.

QUEST ARCHETYPE

```
#<quest vnum>
quest title
~
quest instructions (seen when quest is given)
~

quest completion text (seen when quest is finished)
~
<min level> <repeatable> <type> <timer> <vnum1> <vnum2>
<questmob> <gold_reward> <exp_reward> <qp_reward> <obj_reward> <cost>
```

TIPS AND OBSERVATIONS

- Remember, the quest mob must be given the C, which will flag it as a "QUESTOR." Otherwise, it will not function.
- Use the `min_level` field and the mobile hatred flags to customize who can be granted your quest.
- A quest doesn't have to be one in the traditional sense. A guard could give a player a key to a locked door, if the player brings him a mug of ale from the local inn. An old man could send the player off to deliver an important message in another city, where they will be richly rewarded. Be creative!
- One major component of the quest is that the player should learn something upon completion. Give a good, detailed description of exactly why the player is being sent on this quest. "Go kill evil mage Tim, he is my enemy!" is bad. "Far away in the mountains of Thron, an evil mage has built a fortress, terrorizing the lands..." is much better, because it gives the quest a sense of purpose and background. Once again, be creative!
- Quests can be brought in or edited while the mud is running. To do this, edit the file and use SOURCE QUESTS to bring it in. If this is a new quest, you need to flag the new quest mob with the QUEST flag before you source in the quests file. Once the file is sourced in, purge the quest mob and reload them. The mob should then load with the quest information. Test the quest with a mortal all the way through to make sure all of the parts are working.

XII SPECIAL PROCEDURES

There are two kinds of special procedures: `spec_procs` and `mprogs`. Special procedures (or programs) are generally abbreviated to "spec procs" or "progs." They are programs that mobs, objects and rooms execute when certain events happen. Progs enhance the player's experience as they force the player to interact and take part in the zone's story. Some control and initiate certain events in the game.

SPEC_PROCS

These are special procedures included in the code. These procs can only be modified in the code and recompiled into the mud to be used. These were the original method for a mob, room, or object to do special actions. Examples of mobs include Puff, Hermes, the Midgaard Mayor, Fido, etc. Currently, `spec_procs` are used on mobs for skills and spells related to classes. When you assign a mob a specific disposition, it will automatically include the `spec_proc` for that class. `Spec_procs` can still be written for a mob, object, or room to do something but they need to be written by a mud coder.

MPROGS

Mprogs are easier for a builder to deal with. They are code on a mob or object. Mprogs can be seen and edited in the mud itself and in the mob or object files. It is recommended that inexperienced builders should not attempt to write progs until

they have a firm grasp of how they work. **Tutelage under a builder with extensive prog experience is highly recommended.**

When a mprog is executed, the mob itself performs the actions demanded by the prog. When an oprog is executed, a "supermob" enters the room and performs the actions. This supermob is not really a mob in the traditional sense: it cannot be seen by players and can only perform a portion of mprogs as oprogs. For example, the command mpdelay cannot be used in oprogs. In general, most commands found in mprogs can be used in oprogs, provided that it is logical for an object to perform these commands. As a result, mprogs are usually longer and more complicated than oprogs due to their flexibility.

There are extensive helpfiles written on the MUD which provide very detailed information about writing progs. The help files can only be accessed by Immortals, so to view them, you must be on your builder character on the Builder's Port. These files begin with the prefix "mp" (as with most prog commands). A good file to start looking at is mpreference.

Since you can do a lot of things with a MPROG and there are many commands, we have moved MPROG information to another manual.

To view an MPROG, use the MPSTAT command:

```
< > mpstat fido
Name: a beastly fido  Vnum: [3062]
Short description: a beastly fido
Hp: 11/11  Mana: 20/20  Move: 96/96
Lv: 1  Class: MOB (0)  Align: -200  AC: 9  Gold: 0  Exp: 5
1> act_prog pats 100
em wags his tail happily.
```

This fido has one MPROG and it's that he will wag his tail if he is pated. Mobs can have 0, 1, or many mprogs.

TIPS AND OBSERVATIONS

The use of progs is not restricted to puzzles. Many short, simple progs can greatly add to the atmosphere of your zone.

XIII BUILDER'S RULES AND GUIDELINES

- You should not give any assistance to PCs. This includes gold, experience, equipment, or information that they shouldn't have. Information that they shouldn't have includes the stats of themselves, a mob, or a weapon.
- In other words, the players should find out how difficult your mobs are, how useful the equipment is or where it is located, and the general layout of the area, by exploring it on their own. Do not answer questions regarding this information.
- Building is a privilege allowed to those that have reached immortal status, not a means for a player to reach immortality. Mortals WILL NOT be advanced to immortality on the sole basis of area contribution.
- This document is protected under copyright. You may not distribute this document without permission from the owners of Legends of Kallisti MUD, although we do encourage you to keep a hard copy for your own personal use.
- In general, avoid playing your own areas. Since you are the creator, you know your way around them much better than the other players do. Furthermore, do not help or give hints to players that are exploring your area.
- To receive a zone assignment, you must submit a plan ahead of time, which describes the area in detail. The plan should include enough detail to clearly show both what you have in mind, and how it fits into the theme and structure of the MUD, and should include the mobs and objects found within, as well as the suggested levels and desired location type, i.e. the type of terrain and where the area is to be located, and examples of some of the descriptions.
- Descriptive 'puzzle' or 'quest' areas are greatly preferred. Your areas, although they can be large, should provide a certain atmosphere about them. In general, quality is better than quantity.
- The optimal area is one in which players LEARN SOMETHING that they did NOT know before and is USEFUL

to them in BOTH solving the area (e.g.: they can't solve it without it) AND in real life. Ideally, it will be in a manner that they can't find the info on the MUD and have to go find a reference elsewhere to help them.

- We reserve the right to NOT use an area that is submitted if we feel that it is inappropriate to the Legends of Kallisti MUD or for ANY OTHER reason. It is completely possible that your area will not be used for 'personal' reasons.
- Once submitted, all areas become the property of the Legends of Kallisti MUD and are subject to changes and alterations without consent of the builder. We will try to the best of our abilities to notify builders of changes to their areas. However, we are in no way required to do so.
- In an effort to maintain a unique database for the Legends of Kallisti MUD, no non-public domain areas either built for or submitted to Legends of Kallisti, will be distributed to other muds.

XIV QUICK REFERENCE

FORMATS

Everything except for the formats were deleted from this section. With the cross-referenced table of contents on page one, it became redundant and unnecessary.

FORMAT.WLD

```
#vnum
Room Title~
Room's Description
~
<zone number> <room flag> <sector type> D<direction number>
exit description field
~
door keyword list~
<door type> <key vnum> <exit-to-room vnum>
D<direction number>
exit description field
~
door keyword list~
<door type> <key vnum> <exit-to-room vnum>
{more exits here, if needed}
F
<direction> <speed> <type>
T
<time> <dest room> <make> <counter>
E
extra description keyword list~
extra description
~
E
extra description keyword list~
extra description
~
{more extra desc's as needed}
S
```

FORMAT.OBJ

```
#<vnum> Version 4
namelist~
```

```

short desc~
long desc~
~
<object type> <wear flag> <extra flag> <comp flag> <anti flag> <min level>
<object values (six digits)>
<weight> <value> <rent cost> <size>
E
keywords~
extra desc
~
A
<apply type> <apply amount>

```

FORMAT.MOB

```

#vnum Version 3
name list~
short desc~
long desc
~
mob desc
~
<S|T> <action flags> <affection flags> <hatred flags> <affection2 flags> <mob
flags>
<level> <thac0> <ac> <hit points> <mana points> <damage>
<str> <int> <wis> <dex> <con> <cha> <luk>
<gold> <experience> <alignment>
<loading position> <default position> <gender> <race> <size>
<disposition> <special attack> <melee message> <frequency>
<message seen in room>
~
<message seen in connecting rooms>
~
>type_prog
Some code
~
|

```

FORMAT.ZON

```

#zone number
<name of zone>!<name of creator>~
<top of zone> <lifespan> <reset mode>
<command list>
S
#99999
$~

```

FORMAT.SHP

```

#vnum~
<item sold vnum 1>
<item sold vnum 2>
<item sold vnum 3>
<item sold vnum 4>
<item sold vnum 5>

```

```

<multiple for selling items>
<multiple for buying items>
<item type bought 1>
<item type bought 2>
<item type bought 3>
<item type bought 4>
<item type bought 5>
<message 1>
<message 2>
<message 3>
<message 4>
<message 5>
<message 6>
<message 7>
<temper>
<open 1>
<close 1>
<open 2>
<close 2>
...
...
#99999
$~

```

FORMAT for QUESTs

```

#<quest vnum>
quest title
~
quest instructions (seen when quest is given)
~
quest completion text (seen when quest is finished)
~
<min level> <repeatable> <type> <timer> <vnum1> <vnum2>
<questmob> <gold_reward> <exp_reward> <qp_reward> <obj_reward> <cost>

```

XV CREDITS

Upgrades and Improvements

DATE	VERSION	EDITED BY	DATE	VERSION	EDITED BY
Dec 14, 1993	1.1 (Kallisti)	Coyote	Mar 31, 1998	1.0e (Eris)	Rowan
Jan 16, 1994	1.2 (Kallisti)	Rasta	Apr 10, 1998	1.0f (Eris)	Rowan
May 27, 1994	2.1 (Kallisti)	Rasta	Sep 16, 1998	1.0g (LoK)	Impala
Aug 7, 1994	2.2 (Kallisti)	Rasta	Sep 1, 2001	1.0h (LoK)	Izzy
Mar 16, 1995	3.0 (Kallisti)	Rasta	Aug 18, 2002	1.1 (LoK)	Drifter
Mar 4, 1997	1.0 (Eris)	Rowan	Aug 21, 2002	1.2 (LoK)	Aquione
Jul 31, 1997	1.0a (Eris)	Rowan	Feb 18, 2004	2.0 (LoK)	Jupiter
Feb 28, 1998	1.0b (Eris)	Rowan	May 31, 2006	2.1 (LoK)	Yojimbo
Mar 13, 1998	1.0c (Eris)	Rowan	Aug 27, 2009	3.0 (LoK)	Toozdae
Mar 29, 1998	1.0d (Eris)	Rowan	Sept 11, 2018	4.2 (LoK)	Ivy

This version of the Builder's Handbook is created for Kallisti MUD/Legends of Kallisti, version 5.0.

If there are any questions about this document, please email the Admin list: KallistiMud@gmail.com or contact the

administration.

If you do not have access to the Builders list, please contact the Immortals at Legends of Kallisti MUD. (c) Copyright 1997, 2009, 2018 by KallistiMUD and Legends of Kallisti MUD.

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